
ROSE'S PUBLIC SCHOOL GEOGRAPHY

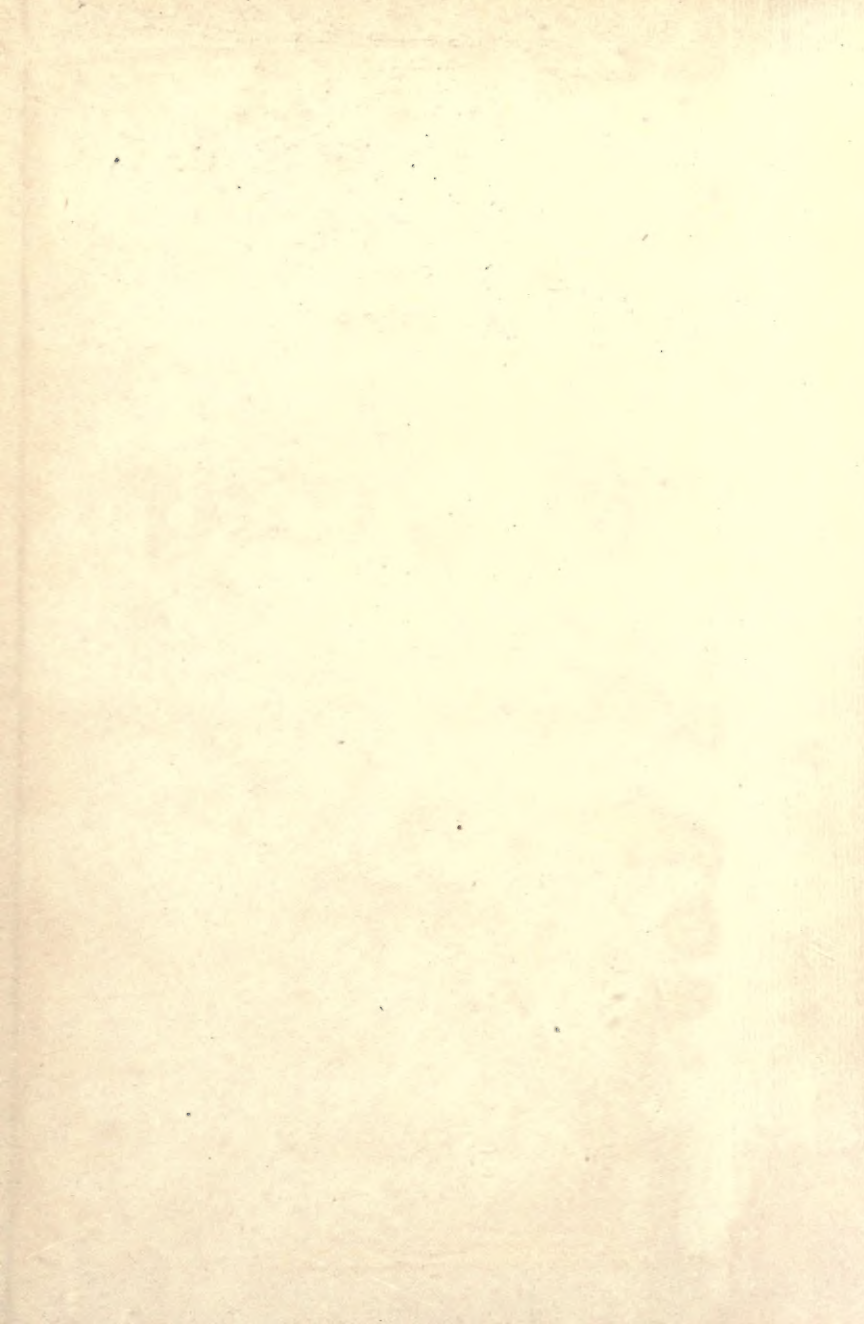
THE WORLD

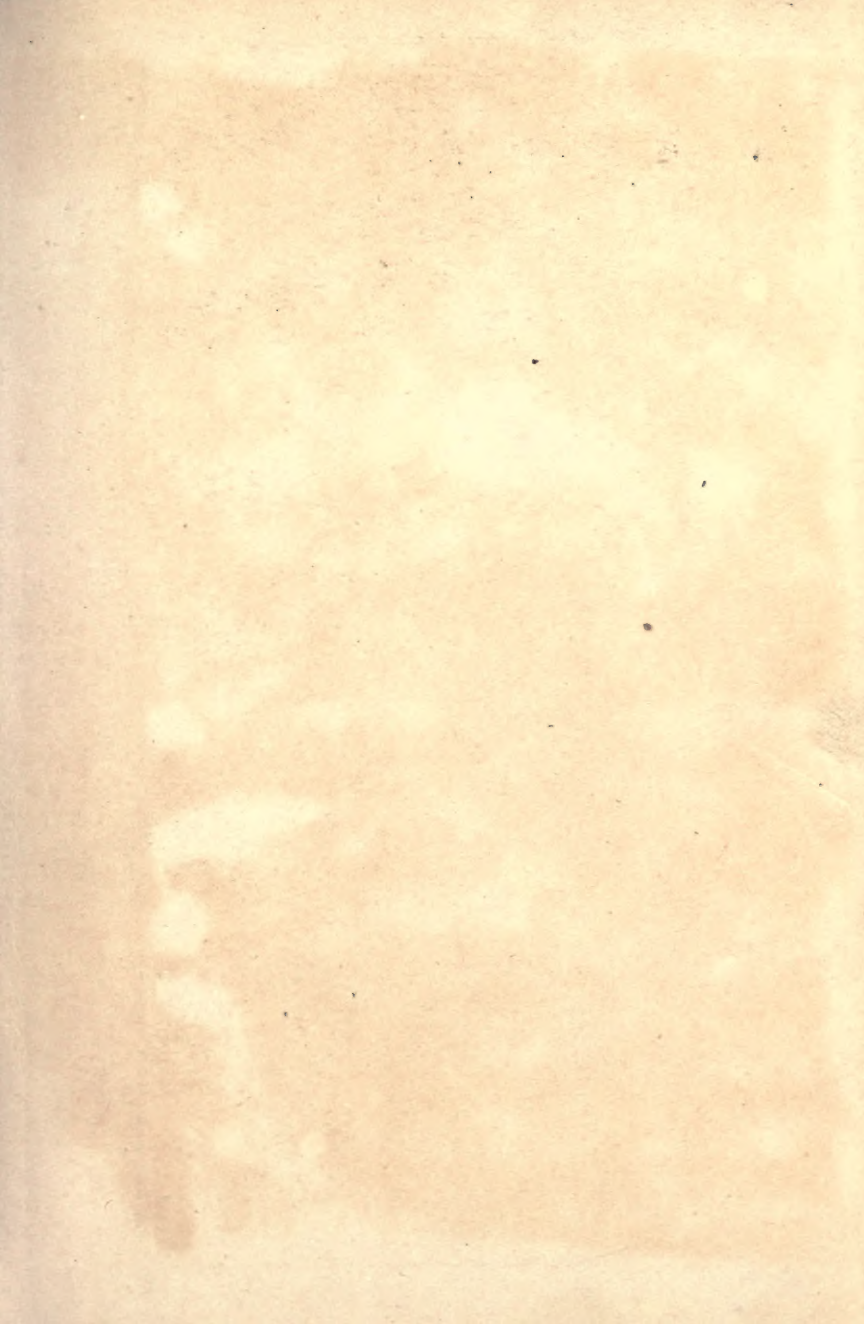
ITS CONTINENTS AND
COUNTRIES

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Rose's Public School Geography

THE WORLD

ITS COUNTRIES AND CONTINENTS


WITH NUMEROUS MAPS AND DIAGRAMS ILLUSTRATING THE
TEXT, TOGETHER WITH MANY ILLUSTRATIONS TAKEN FROM
PHOTOGRAPHS OF ACTUAL SCENES



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INTRODUCTORY

In this book an attempt is made to show the close relationship existing among the various details generally presented to the young student in the study of geography. It is intended that the chapter on "The Earth as a Whole" should be thoroughly studied and understood before proceeding farther with the subject, as it forms the basis of the work in the chapters which follow. Especially is this the case with the sections, *The Surface of the Earth*, *The Heat Belts*, *Winds*, *Rainy Districts*, *The World's Great Rivers*, and *Rainless Districts*, and their accompanying diagrams.

As this work is intended for use in schools throughout the Dominion, a very large space is devoted to the description of our own country; and this description refers to the Dominion as a whole, rather than to any individual Province, although each Province receives its proportionate amount of treatment. Also, as our country forms part of the British Empire, considerable prominence is given to all parts of that great empire throughout the world.

In some cases names of places in India, China, and other eastern countries may be found spelled differently in the maps from what they are in the text. For the spelling of such names there is no fixed standard. In the languages of those countries the words are not spelled, but are written in characters. The English equivalents must

therefore be spelled as the words sound, and different authorities naturally use different letters—for example, Deccan and Dekkan; Hindoo and Hindu; Pekin and Peking; Yang-tse, Yang-tsi, and Yang-tze; Tokio and Tokyo, etc.

Greater prominence is given to diagrams than has heretofore been given in any Canadian Geography, and great care has been used to select reliable and instructive illustrations, and to secure maps of the highest excellence.

PUBLIC SCHOOL GEOGRAPHY

THE EARTH AS A WHOLE

The Earth, the Moon, and the Sun. You have learned that the earth is a large ball, rotating around an axis which points almost directly toward the north star. If we could rise up from the earth to a very great distance, say twenty thousand miles, it would appear to us much as the moon does, but very much larger. Through a powerful telescope its continents and oceans would be readily seen through the thin covering of the atmosphere, veiled here and there by clouds; its mountain systems would look like wrinkles on its surface; its plains and hills would seem nearly smooth; and the ocean would appear quite smooth.

The greatest distance around the earth, that is, its *circumference*, is about 25,000 miles, and the greatest distance through it, that is, its *diameter*, is about 8,000 miles. At about what rate per hour, therefore, do points on the earth's surface at the equator rotate? Is the rate of movement as rapid where we live? Explain why.

The earth has another movement besides that around its axis. It is continually travelling around the sun (Fig. 4), along a path that is nearly circular. This path is called its *orbit*. The length of time the earth takes for a full journey around the sun we call a *year*. The distance from the earth to the sun is believed to be about ninety-three million miles; the length of the orbit is therefore about five hundred and eighty million miles. Calculate how far

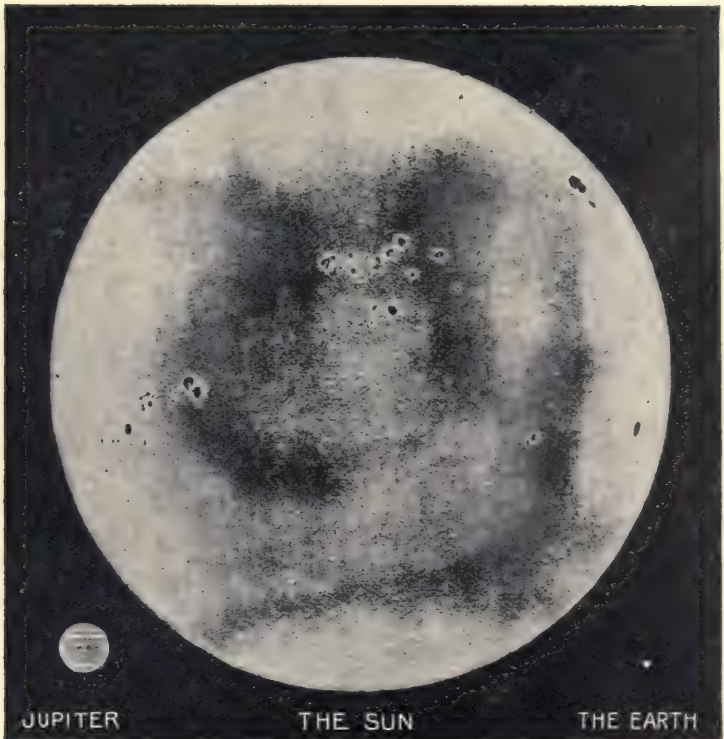


FIG. 1—The Sun as seen through a powerful telescope. Comparative sizes of the Earth and Jupiter, the largest of the planets

the earth travels in a day, in an hour, in a minute, and in a second. While we say the earth *rotates* on its axis once in a day, we also say it *revolves* around the sun once in a year.

The moon (Fig. 2) is a body which resembles the earth in some respects. It is spherical, and its surface appears to be land covered with mountains, valleys, and plains. It is believed, however, that it has no seas or water of any kind, and no atmosphere. As the earth revolves around

the sun, so the moon revolves around the earth. It is smaller than the earth (Fig. 3), having a diameter of about 2,150 miles, and it is distant from the earth about 240,000 miles. Why does the part which we see vary in size and shape?



FIG. 2—The Moon as seen through a telescope

How many days is it from one new moon to the next new moon? This period is called a *lunar month*. How many lunar months are there in a year?



FIG. 3—Comparative sizes of the Earth and Moon

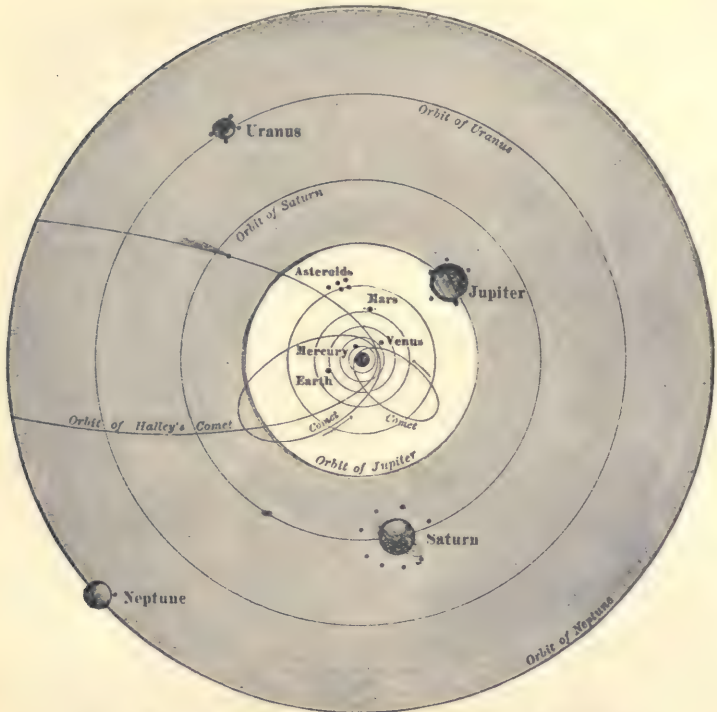


FIG. 4—Diagram showing the planets, their orbits, and comparative distance from the Sun

The earth is not the only body which travels around the sun (Fig. 4). Among many which do so are eight (including the earth) the diameters of which vary from three thousand to nearly ninety thousand miles. The orbits of all of them are nearly circular, and their distances from the sun range from about thirty-five million to nearly 2,800 million miles. These bodies are called *planets*. In order of size, commencing with the smallest, their names are Mercury, Mars, Venus, Earth, Uranus, Neptune, Saturn, and Jupiter. From the diagram name them in order of their

position, beginning with the one nearest the sun. The planets are all dark bodies, composed probably of the same material as our earth, and visible to us only because the light of the sun brightens them. Nearly all of them are accompanied by moons which revolve about them, as our moon revolves around the earth.

The sun, the planets, moons, and all other bodies which revolve around the sun make up the *Solar System*.

Although we think the earth is large, it is small as compared with the planet Jupiter (Fig. 1), which is nearly 1,400 times as large as our world. Yet Jupiter is small as compared with the sun (Fig. 1), the latter being fully one thousand times as large as that planet. The sun is about 867,000 miles in diameter, and more than six hundred times as large as all the bodies which revolve around it put together.

The Stars. Observe the starry heavens any clear night. Are all the stars of the same size and color? Do they occupy the same positions at ten o'clock that they did at eight? If not, in what direction have they apparently moved? Do any stars rise and set? If so, in what parts of the sky do they rise, and in what parts set? Compare the movement of stars with that of the sun. How do you account for the movement of each?

Nearly all the stars keep the same relative positions in the sky year after year. Three or four seem to move very slowly toward the east among the others, and are in view for only a few weeks or months each year. The latter are really planets of the Solar System which occasionally come into view in their course around the sun. The planets Venus and Jupiter shine more brightly than any other heavenly body except the sun and the moon. Those stars which do not change their relative positions in the sky are called *fixed stars*.



FIG. 5—The Great Bear

The clusters or groups of stars are called *constellations*. Ancient astronomers gave names to these groups, usually those of animals, noted heroes, or the deities they worshipped. These names are still used.

You are already familiar with the group of stars known as the Dipper. How is this group used in finding the direction north?

The constellation, of which

the Dipper is a part, was called Ursa Major (Fig. 5), or the Greater Bear. On the opposite side of the north star from Ursa Major, and at about the same distance from it, is Cassiopeia,—“the lady in her chair,”—having five bright stars arranged somewhat like the letter W (Fig. 6). These two groups may be seen on any clear night in either summer or winter. Notice their positions at the same hour every night for a few months, find out the course of their apparent movement, and try to make out the reason why they seem to move.

During the winter months a large square-cornered group containing many bright stars moves westward across the southern sky



FIG. 6—Cassiopeia

every evening. This is the constellation Orion (Fig. 7), named after a celebrated mythical giant and hunter of ancient times. The three stars in line across the centre of the group are the "spangles in Orion's belt," and if the line of this belt be continued downwards it will pass close to Sirius, or the "dog star"—the most brilliant of the fixed stars.



FIG. 7—Orion

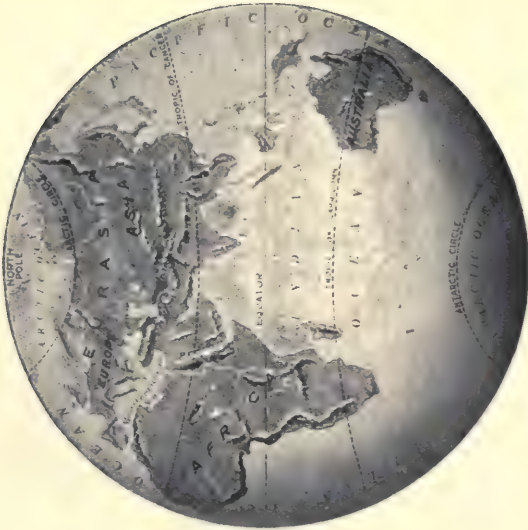
The stars are believed to be other suns and centres of systems, but so far away that they look like mere twinkling points of light, with their attendant planets quite invisible.

Surface of the Earth (Fig. 8). About one quarter of the earth's surface is land, and the remainder water or ice. What is a continent? What is an ocean?

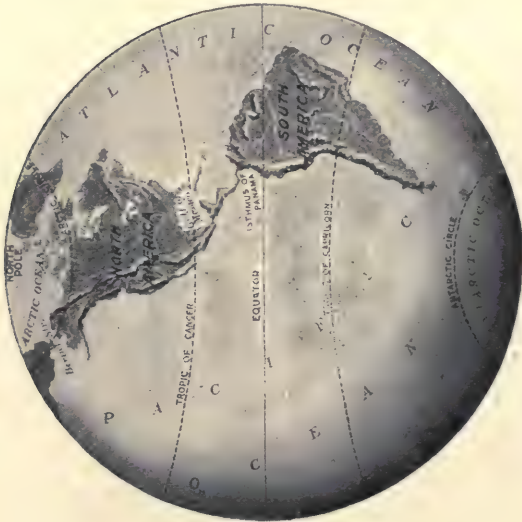
The names of the continents in order of size, beginning with the largest, are Eurasia (Europe and Asia), Africa, North America, South America, and Australia. We speak of the Continent of Europe, but it really forms part of the great continent geographically called Eurasia. Similarly the names of the oceans are Pacific, Atlantic, Indian, Antarctic, and Arctic.

On page 17 is a map of North America (Fig. 9). Where is the continent mountainous, and where level? How do the mountains in the west compare in size with those in the east?

The western mountains of North America form part of a vast horseshoe-shaped system encircling the north pole, and extending about twenty thousand miles through the four large continents. The whole system is known by different



Eastern Hemisphere



Western Hemisphere

Fig. 8—The World in Hemispheres showing Continents and Oceans

names in different parts of the world. In South America the mountains are called the *Andes*, and in North America the *Rocky Mountains*.

As the system continues into Eurasia it spreads out into various chains that are more or less parallel, the highest of which are the *Himalayas*. In the southern part of Asia the system divides, one part extending westward through the *Alps* in Europe

and the *Atlas* range in northern Africa, and the other southward along the eastern side of Africa. All the great mountains of the world are in this system. Trace the system on this small map (Fig. 8), and also on the school globe.

From the great ridge the land slopes outwards for a long distance toward the Atlantic and Arctic Oceans, forming four vast plains. In South America and North America these plains are fertile, and in North America are well cultivated. In Asia and Africa parts of them are not fertile, chiefly because of unfavorable weather; that in northern Asia being very cold, and that in northern Africa and the adjoining part of Asia being very hot and dry.

In order to show the whole globe at a glance, the Northern Hemisphere is here given with the North Pole



FIG. 9.—Relief Map of North America

as the centre and the Equator as the largest continuous circle; the Southern Hemisphere is shown by gores turned up, on the same principle as you would cut the peel of an orange and turn up the four quarters from below.

The direction of the Earth's rotation is shown by the arrow points.

On the outside of the ridge the land descends abruptly to the sea everywhere except in south-eastern Asia, where there are two large, fertile, and densely populated plains.



FIG. 10—Relief Map of the World

Find on the map (Fig. 10), or on the school globe, the following slopes:

- i. In North America—*Pacific, Atlantic.*
- ii. In South America—*Pacific, Atlantic.*
- iii. In Eurasia (Europe and Asia)—*Northern, South-eastern.*
- iv. In Africa—*Atlantic, South-eastern.*

If the waters of the ocean could be entirely removed, the bottom, or *sea-floor*, would be found covered with hill, valley, and plain, just as the continents are, and what are now islands or groups of islands would be the summits of ranges or systems of mountains.

The Heat Belts. Why is the climate always hot near the equator? Why does it become cooler as we approach the poles? State two reasons why it is always exceedingly cold at the poles.

The hot region around the earth at the equator is the *Hot Belt*, and the cold areas around the poles the *Cold Belts*. Lying between the Hot Belt and the Cold Belts, and extending around the earth, are the *Warm Belts* next the Hot Belt, and the *Cool Belts* next the Cold Belts (Fig. 11).

The Hot Belt varies in width from two thousand to three thousand miles. It has constant summer, and some parts of it are almost too hot and oppressive for people from the cooler belts to endure. In it days and nights are nearly equal throughout the year.

In the Warm Belts the summers are long and warm, and the winters short and temperate, rain usually falling in the latter instead of snow.

The Cool Belts have summer and winter nearly equal in length, the summer being temperate, and the winter cold and healthful.

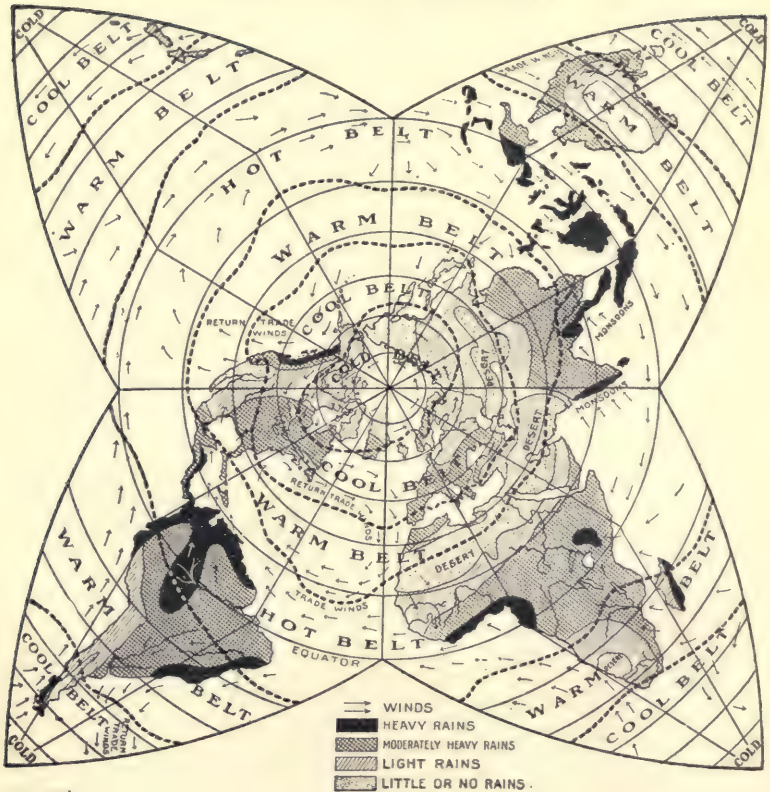


FIG. 11—The Heat Belts

The arrows show the general direction of the winds; the black, or shaded parts, the proportionate rainfall; and the white the rainless deserts. The heat belts are shown by lines of equal temperature, called isothermal lines, which you will note do not follow a straight line, but vary on account of the formation of the earth's surface, or other causes.

At the centres of the Cold Belts around the north and south poles, there is constant winter. Indeed, it is impossible to distinguish land from water, as they are both covered with everlasting ice and snow; and there are no people, no animals, and no plants, because of the extreme cold. On

the outer margins of those belts summer lasts for only a few weeks (Fig. 12).

No one has ever yet succeeded in reaching either of these centres or poles, owing to the great difficulties of travelling and carrying provisions, although many expeditions have been made for that purpose, and many lives have been lost in vain attempts.

Through what continents does the Hot Belt extend? (Fig. 13.) The northern Cold Belt? In what belts are North America, Africa, and Australia?



FIG. 12—An Eskimo Boy, who lives in the Cold Belt

Winds. State what you have already learned about the causes of winds.

In the Hot Belt the air is warm and light, so that colder air from both north and south moves under it and lifts it up. Breezes thus tend to blow from the cooler belts into the Hot Belt.



FIG. 13—Two New Guinea Boys, who live in the Hot Belt

In what direction does the earth rotate, and at what rate at the equator? The rapid rotation

of the earth causes the breezes toward the Hot Belt to be turned in the Warm Belts toward the south-west and north-west, and in the Hot Belt directly westward during the whole year. These westward breezes are called *trade winds*. When they cross the Atlantic Ocean into South America they are turned aside toward north and south by the high Andes Mountains, and on reaching the Cold Belts, where the rate of the earth's rotation is slower, they blow eastward to their starting place. The trade winds of the Pacific also are in part turned northward and southward by south-eastern Asia, and return eastward in the Cool Belts. The winds which blow eastward over both oceans are called *return trade winds*.

It is thus seen that four great circular currents of wind are set up over the two oceans and adjoining parts of the continents, two north of the equator, and two south (Fig. 11).

During the voyage of Columbus to America in 1492 his little fleet of three sailing vessels got into the Trade Winds and was rapidly wafted toward the New World. The sailors became much alarmed at the steadiness of the winds toward the west, fearing that they should not be able to get back home again. In the return trip they went to the northern border of the Warm Belt, and then after a stormy voyage they reached Europe again.

Rainy Districts. The trade winds carry a large amount of vapor. When they reach the highlands at the west, and rise up the mountain sides, or blow toward the north and south, they give up much of this vapor in the form of rain. Why?

The Atlantic trade winds in this way form two vast areas of heavy rainfall on the American continent. One is on the great slope between the northern Andes and the Atlantic, and the other is on the slope between the southern Rocky Mountains and the Atlantic (Fig. 11). Where in both of these areas do you expect to find the greatest amount of rainfall? Why?

When the Pacific trade winds reach Asia and Australia they cause heavy rains on the eastern coasts of those continents and the islands near them (Fig. 11.)

The trade winds in the Indian Ocean are joined by a portion of the Pacific trade winds, and blow across Africa. They cause heavy rainfall in the central part of the continent, more particularly on the eastern side (Fig. 11).

The return trade winds of the North Atlantic gather moisture in their passage eastward across the ocean, and cause heavy rainfall over nearly all western and northern Europe. Similarly the return trade winds of the Pacific cause heavy rains on the western slopes of the Rocky Mountains in the far north and the Andes in the far south (Fig. 11).

The rainfall in parts of India in southern Asia is probably the heaviest in the world. Winds called *monsoons*, heavily laden with moisture, blow in summer from the Indian Ocean up the slopes of the Himalayas and there empty their rains (Fig. 11). The annual rainfall in some places reaches a depth of from 300 to 500 inches. In winter the winds blow southward, and are *dry* winds. Why are they dry?

There are also winds in western Africa, along the shores of the Gulf of Guinea, which resemble monsoons, and which help to bring about heavy rainfall. What other winds carry moisture into the same region?

The World's Great Rivers. The great rainfall areas are drained by the world's great rivers.

When necessary use the colored maps of the continents in this book in preparing your answers to the questions which here follow.

Name the chief river systems in the Atlantic slope of North America. Account for their formation.

Which is the larger river, the Mississippi or the St. Lawrence? Why?



FIG. 14— In the Telka Mekan Desert

What are the chief rivers in Europe? Account for their formation. In the north-eastern slope of Asia? Account for their formation. How do they compare in size with the rivers of North America? Give reasons why.

Name the chief river systems in the Atlantic slope of South America.

Account for the formation of these river systems.

Which is the larger river, the Amazon or the Plata? Why?

The Amazon is the largest river in the world. Why is it larger than the Mississippi?

Name the large rivers of the south-eastern slope of Asia.* Account for their formation.

Why are there no large rivers in western Australia?

What are the chief rivers supplied by the central African rains?

Why are most of the rivers of the Pacific slopes of North America and South America small and unimportant?

What is the large river south of the Himalayas in Asia? Account for its formation.

Name the large river of western Africa emptying into the Gulf of Guinea. From what winds and rainfall is it supplied?

*The Chinese words *Ho* and *Kiang* mean *River*. We therefore should not say "Hoang Ho River," but "Hoang Ho" or "Hoang River." Similarly, we should not say "Yang-tsi Kiang River," but "Yang-tsi Kiang" or "Yang-tsi River."

Rainless Districts. In the American continents there are two areas which are not reached by moist winds. They consequently receive little or no rain, and are hot dry deserts. One of them is in the western central part of North America and the other is a long narrow strip of land on the Pacific coast near the centre of South America (Fig. 11).

In Asia and Africa there are two great rainless areas (Fig. 14), which are much larger than either of those in America. One of these, called the Desert of Gobi, is in central Asia. It is shut in on all sides from moisture-bearing winds by ranges of the world's great mountain system, described on page 17. Another is in western Asia and northern Africa, and is a continuation of several deserts, the largest of which is called the Sahara. Winds which blow over this region from the north give up nearly all their moisture among the highlands of the European branch of the world's mountain system, while the moisture-laden winds from the Indian Ocean do not reach the region at all. There is also the Kalahari Desert of southern Africa, not visited by vapor-bearing winds, partly because of the mountains and highlands east and south of it.

In the Australian continent there is a large district from which rains are excluded by the mountains on the east coast, and which is therefore desert.

Study the map (Fig. 11), for the location of rainy and rainless districts.

The Ocean. The waters of the ocean are never at rest. This is one reason why they remain so pure and why ocean breezes are so healthful. What are waves, billows, and breakers, and what is the cause of each? What are tides?

There are also *currents* in all the oceans. We may think of them as great rivers or drifts, gradually expanding in width as they flow, but not mixing with the surrounding ocean, moving round a centre at a rate of from half a

mile to five miles an hour, according as their waters may be compressed within a narrow channel, or can expand in the free ocean. Several causes bring them about, one of which is the rotation of the earth on its axis, leaving the water behind and causing it to flow in the opposite direction. In what direction does the earth turn? In the Atlantic and Pacific Oceans near the equator, therefore, strong currents are set up toward the west. The land on the west sides of these oceans causes the currents to divide and flow northward and southward, and the branches thus



FIG. 15—Ocean Currents of the Atlantic

formed are whirled around to their starting points; forming two great circular currents, or eddies, in each ocean. Great quantities of

floating matter and seaweed are drawn toward the centres of these eddies, forming collections which look like low islands when viewed from a short distance. The centre of the northern eddy in the Atlantic has the name of the *Sargasso* or *Seaweed Sea* (Fig. 15). The branch of the Atlantic current which flows past North America is called the *Gulf Stream*, and the branch of the Pacific current flowing past Asia, the *Japan Current* (Fig. 16). The waters in the currents just named are quite warm. Can you state why? The only other ocean currents which need be mentioned here are the cold *North*

Polar Currents flowing out of the Arctic Ocean between Greenland and Labrador in the Atlantic, and through Bering Strait southward along the coast in the Pacific. Why are their waters cold? When these cold currents meet the warm currents, they sink underneath them, in the same manner as the cold air when meeting the warm air. (See page 51, Part I.)

At great depths the ocean is very cold and in darkness. Heat and light make their way only a short distance

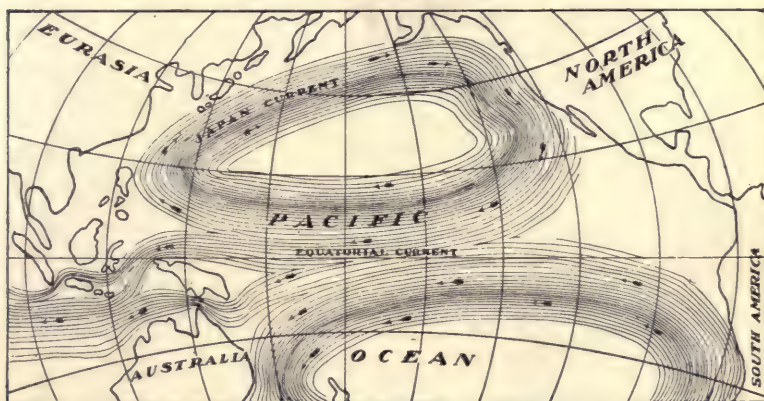


FIG. 16—Ocean Currents of the Pacific

through water. Nearly all the life the ocean contains, both plant and animal, is found in shallow places or near the surface. What have you already learned is the depth of the ocean? Why are its waters salty?

Is ice heavier or lighter than water? When a glacier reaches the sea and moves down into it, large masses of ice are broken off, sometimes with a loud report resembling heavy thunder and causing a great commotion in the water (Fig. 17). In this way *icebergs* are formed (Fig. 17). Thousands of icebergs are carried southwards into the Atlantic Ocean every summer by the North Polar



FIG. 17—A Glacier, with Iceberg detached

current. They often reach a height of 200 or 300 feet above the surface of the water, and this is only about one-eighth of their entire mass. In the south polar regions there are often vast *floes*; or flat bodies of drifting ice, extending for many miles. Icebergs chill the air around them, cause dense fogs, and become very dangerous to navigation.

Latitude and Longitude. We often need to describe the location of a place on the earth. To do this we make use of two systems of lines which we imagine are drawn upon its surface.

One system is made up of a number of circles, called *parallels of latitude*, drawn around the earth parallel with the equator (Fig. 18). The other consists of a number of lines, called *meridians* (Fig. 18), drawn from one pole to the other across the parallels of latitude. All the lines in both systems are numbered, the parallels from the equator to the poles, and the meridians both eastwards and westwards from the *prime meridian*. The prime meridian

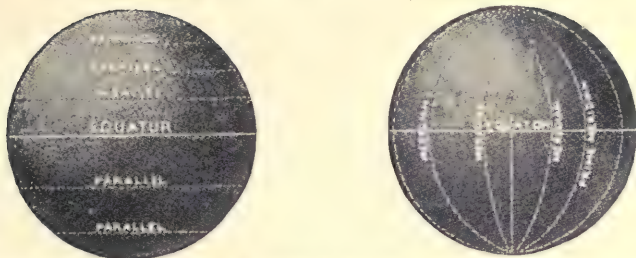


FIG. 18—Showing some of the Parallels of Latitude and Meridians of Longitude

used by the British people passes through the observatory at Greenwich, part of the city of London, England, and is therefore called the *Meridian of Greenwich*.

The circumference of every circle is divided into 360 equal parts, and each part is called a *degree* ($^{\circ}$).

The distance from the equator to one of the poles is what fraction of the total distance around the earth? How many degrees, therefore, are there in that distance? The latitude of a place, then, is never greater than 90° , and the place is in *north latitude* when it is north of the equator, and in *south latitude* when it is south of the equator.

Since we number degrees of longitude both eastwards

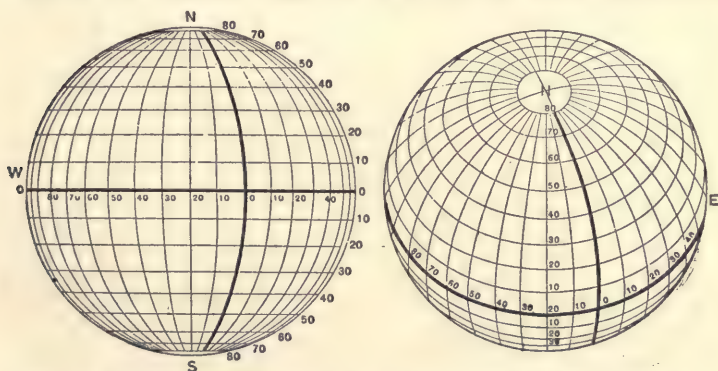


FIG. 19—Showing some of the Parallels of Latitude and Meridians of Longitude. The Equator and a Prime Meridian are shown as heavy lines

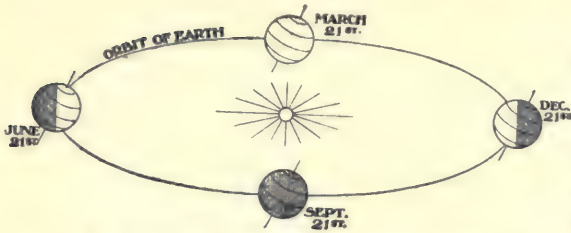


FIG. 20—The Orbit of the Earth around the Sun

and westwards from the prime meridian, the longitude of a place is never greater than 180° ,

and the place is in *east longitude* when it is east of the prime meridian, and in *west longitude* when it is west of that meridian. It is to be noticed that degrees of longitude become smaller toward the poles, those at the equator being 60 geographical or nautical miles, or about 69 English land miles long. Degrees of latitude are of the same length—about 69 miles—all over the earth.

The study of the diagrams on page 29 (Figs. 18 and 19), will help you to understand this subject. The parallels of latitude and meridians that are shown in Fig. 19 are ten degrees apart, but you must remember that many lie between these which are omitted.

Search on the school globe, and name the cities whose latitude and longitude are *nearly* as follows: $22^\circ\text{N.}, 88^\circ\text{E.}; 45^\circ\text{N.}, 76^\circ\text{W.}; 34^\circ\text{S.}, 18^\circ\text{E.}; 36^\circ\text{N.}, 140^\circ\text{E.}; 60^\circ\text{N.}, 31^\circ\text{E.}; 41^\circ\text{N.}, 74^\circ\text{W.}; 38^\circ\text{S.}, 145^\circ\text{E.}; 2^\circ\text{N.}, 104^\circ\text{E.}; 23^\circ\text{S.}, 43^\circ\text{W.}; 40^\circ\text{N.}, 117^\circ\text{E.}; 41^\circ\text{S.}, 175^\circ\text{E.}; 50^\circ\text{N.}, 97^\circ\text{W.}; 21^\circ\text{N.}, 158^\circ\text{W.}$

Find the latitude and longitude of five Canadian cities not referred to in the previous paragraph.



FIG. 21—Showing the Tropics and Polar Circles

Throughout the long journey taken by the earth, in its orbit (Fig. 20), around the sun every year, its axis always points in the same direction—toward the North Star. This direction is a little oblique with reference to its orbit, and for that reason the sun shines vertically over points north of the equator half the year, and south of the equator the other half. The greatest distance the sun is thus brought on either side of the equator is about $23\frac{1}{2}$ degrees, and the circles around the earth at these latitudes are called *tropics*. The one north of the equator is the

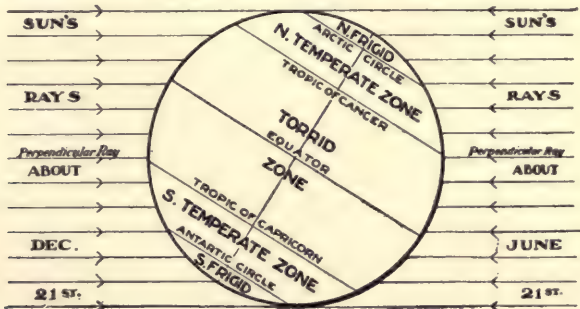


FIG. 22—Showing Zones

Tropic of Cancer, and the one south the *Tropic of Capricorn* (Fig. 21).

When the sun is vertical over the Tropic of Cancer its light shines $23\frac{1}{2}$ degrees beyond the north pole. The circle then formed by the light on the rotating earth is the *Arctic Circle*. When the sun is vertical over the Tropic of Capricorn the light shines beyond the south pole $23\frac{1}{2}$ degrees, and the *Antarctic Circle* is formed (Fig. 21).

By the tropics and polar circles the earth is divided into five *Zones of Light*. Study the diagram (Fig. 22) on this page and name and give the position and boundaries of each zone.

When the sun shines vertically near the Tropic of Cancer it is summer north of, and winter south of, the equator. When the sun's rays are vertical near the Tropic of Capricorn it is summer south of, and winter north of, the equator. What season of the year is it now in Australia? In the British Isles?

If an orange, fixed upon a knitting needle as its axis, be carried around a lighted lamp, with the needle inclined a short distance from the vertical and always pointing in the same direction, the methods of formation of the tropics and polar circles may be illustrated.



FIG. 24—RELIEF MAP OF NORTH AMERICA

NORTH AMERICA

Position and Extent. Find North America on the school globe or on Fig. 8. Is it north or south of the equator? Is it in the Land Hemisphere or in the Water Hemisphere (See Fig. 32, Part I)?

What oceans bound it on the north, east, and west? What continent is near its north-western corner? What strait separates it from that continent? What continent is at the south-east? What isthmus connects it with that continent?

What is the general shape of North America? Where are its broadest and narrowest parts? Which are its longest and shortest sides?

Construct a scale by which you can make measurements on the globe in your school. This may be done by taking a strip of paper that exactly encircles the globe along the equator, marking it into ten equal parts, and one of these at one end of the strip into twenty-five equal smaller parts. Each larger space obtained in this way represents 2,500 miles and each smaller one 100 miles.

What are the distances in a direct line on the earth's surface from Bering Strait to the Isthmus of Panama, and from Bering Strait to the Gulf of St. Lawrence? How long would it take you to travel these distances by railway train running constantly at thirty miles an hour?

Surface. Where does the world's great mountain system pass through North America? What is its name there?

The land from which the Rocky Mountains rise—the Rocky Mountain Plateau—is very high, the bases of the mountains being from a mile to a mile and a half above the level of the Pacific Ocean. Where is the widest part of this plateau (Fig. 24)? About how wide is it at that point (See Scale on Map), and what proportion of the width of the continent does it occupy?

What is the name of the smaller mountain system in the eastern part of North America?

Compare the Rocky Mountains with the Appalachians in length and in width. The Rocky Mountain plateau is much more elevated than the land from which the Appalachian Mountains rise, and the Rocky Mountains themselves are very much higher and more massive than the Appalachians. The peaks of the Rockies are, in many cases, far above the clouds and snow-capped the whole year, while those of the Appalachians are not so pointed and are covered with forests. Mt. McKinley (20,464 ft.), in the Rocky Mountains near the north-west corner of the continent, is probably the highest peak in North America.

Surrounding Hudson Bay is a vast region that is very rough and rocky, but not highly elevated. It resembles the letter V in shape, one part extending north-eastwards to the Atlantic and the other north-westwards to the Arctic. The rocks of this region are said to be of the Laurentian formation, and the mountains in the south are called the Laurentian Mountains.

Lying between these three mountain systems is the great Central Plain of North America. It is not perfectly level, but is much more so than the mountainous districts east and west of it. Much of it is prairie land. What are the prairies?

Climate. What is meant by the term *climate*?

In what heat belts is North America. What belts contain the greater part of it?

From the map (Fig. 11), the rainfall of North America may be studied. Why is there much rain on the Atlantic coast in the Hot Belt and on the Pacific coast in the Cool Belt? Why is there little on the Pacific coast in the Warm Belt?

In Fig. 24 note the dotted lines running across the map. They are called *isothermal lines*, or lines of equal heat.

They do not run in a straight line, but vary according to the formation of the land and other causes. They show the different Heat Belts—Cold, Cool, Warm, Hot.

In the Cold Belt the snowfall is heavy, and the ground is covered with snow and ice nearly the whole year. The amount of snow and its duration on the ground are lessened farther south, so that in the Warm and Hot Belts none falls except on the tops of the highest mountains.

Now find on the relief map of the continent the following regions, and state all you can about their climate:

- i. The islands in the north.
- ii. The country south of Hudson Bay.
- iii. The country around the Gulf of Mexico.
- iv. The central part of the Pacific coast.

Drainage. What large river flows northward into the Arctic Ocean? Find its source. Name three large lakes it drains. (See map of North America, Fig. 23.)

What is the largest lake drained into Hudson Bay? What large river flows into this lake from the west? What river forms its outlet? Many rivers flow from west, south, and east into Hudson Bay, but they are nearly all rough mountain torrents and of little value for commerce. The Saskatchewan is the largest river of the basin, and is navigable for small steamers many miles up from its mouth.

What group of lakes lies south of Hudson Bay? The lake most north-westerly in the group is called Lake Superior and is the largest body of fresh water in the world. What river drains this group of lakes? Into what does it empty? This is the most important river of Canada. Can you state why?

Between the Appalachian Mountains and the Atlantic is a low plain-like slope, watered by many small navigable rivers.

What large river flows south from near the western end of the Great Lakes? Where is its mouth? What large tributary has it from the east? What tributaries has it from the west? Find the source of the Missouri, trace the river to its mouth and follow the course of the water to the mouth of the Mississippi; this is the longest stream of water in the world. What large river flows into the Gulf of Mexico south-west of the Mississippi? Trace on the map the line which separates the waters flowing into the Arctic Ocean and Hudson Bay from those flowing into the Atlantic Ocean and Gulf of Mexico. This line shows the position of the height of land by which the great central plain of North America is divided into two main subdivisions.



FIG. 25—A view in the Grand Canyon of the Colorado River, Arizona

The slope west of the Rocky Mountains has in it several large rivers. Name the one in the extreme north-western part of the continent. Where does it empty? Name the one in the western part of the continent flowing south-west. Into what gulf does it empty? In some parts of its course among the mountains the latter river flows through wonderful gorges, extending for more than two hundred miles, and in some places more than a mile in depth; such gorges are called *canyons* (Fig. 25).

The most important basins and slopes of North America are therefore:

- i. The basin of the Mackenzie.
- ii. The Hudson Bay basin.
- iii. The basin of the Great Lakes and St. Lawrence.
- iv. The Atlantic Coast plain, between the Appalachian Mountains and the Atlantic Ocean.
- v. The basin of the Mississippi (including that of the Rio Grande).
- vi. The Pacific slope.

Coast-Line and Islands. What very large inland bay is in the northern part of the continent? A body of water like this is called not only a *bay*, but sometimes also a *gulf* or a *sea*. What strait joins this bay with the Atlantic Ocean? Both bay and strait were discovered in 1610 by Henry Hudson (Fig. 26), an English explorer, who was cast adrift on these waters by his mutinous crew and was never heard of afterwards.

What large bay lies north-eastwards from Hudson Bay? What strait connects it with the Atlantic? These are named after their discoverers, William Baffin and John Davis, two noted English navigators.



MR HENRY HUDSON

FIG. 26

Portrait of Sir Henry Hudson

What is the largest island in the north, on the east side of Baffin Bay? Except along its south-western coast it is covered the year round with ice and snow. Is the name a suitable one? The weather in the northern part of the island is so cold that sailors as yet have been unable to explore all that part of the coast.

What island lies east of Greenland? Both Greenland and Iceland belong to Denmark, one of the countries of Europe. Iceland is a very cold country, but, strange to say, it contains a noted volcano, Mt. Hecla, and has many *geysers*, or great fountain-like springs through which *boiling-hot* water, regularly and at short intervals, shoots out of the ground (Fig. 27).



FIG. 27—Geysers, Iceland

The other islands in the north are not important, though they are very numerous, and many of them are large. When islands are grouped together in a great cluster, as these are, they form an *archipelago*.

What cape is at the southern end of Greenland?

What gulf is in the most easterly part of the mainland?

What river empties into it? Many Canadian steamships sail down the river, through the gulf, and across the ocean to Europe. What strait is at the north-east of the gulf?

What island lies east of the Gulf of St. Lawrence? It was discovered by the English more than four hundred



FIG. 28—Outline Map of North America

years ago. What cape is at its south-eastern point?

What is the name of the peninsula at the south of the Gulf of St. Lawrence? Sometimes peninsulas are nearly or quite as broad where they join the main land as they are at any other part. What broad peninsula lies between the Gulf of St. Lawrence and Hudson Bay?

What large gulf and sea are at the south-east of the continent? What two

peninsulas partly enclose the gulf? What cape forms the extreme end of Florida? What group of islands partly encloses the sea? One of these islands was the first land found by Christopher Columbus in 1492. He thought it was part of India, and so the group of islands afterwards came to be called the West Indies, and the native people of the new world Indians. What are the largest islands in the group? The British own many of the West India Islands.

What gulf and peninsula are at the south-west of the continent?

What island is a little north of the centre of the Pacific coast? It forms part of the Province of British Columbia in Canada. How does it compare in size with the other islands along the same coast?

What sea is at the extreme north-west of the continent? Very many seals are taken on the numerous islands in this sea.

What great peninsula forms the north-western corner of the continent?

Practise drawing the outline of North America as shown in this little map (Fig. 28), until you can make a neat one of the same size or a little larger in two or three minutes.

Draw a small map of North America and name on it the bordering oceans, the mountain ranges, and chief river-systems and lakes.

Draw another and name on it the chief coast features and islands.

Vegetation. When this continent was discovered the whole country in the east and in the west was covered with great forests, while in the centre, or Great Basin, it was a vast prairie covered generally with long grass, and extending from the Gulf of Mexico far northwards into what is now Canada.



FIG. 29—Dense Tropical Vegetation

In the north the forests were open, so that it was not difficult to pass through them in any direction, while in the south they were dense, the trees and bushes grew so close together and were often so thickly overgrown with vines and thorny plants that it was impossible for a person to make his way through them, except by paths made by wild animals (Fig. 29). How would you account for this difference? In what heat belts are these

dense forests of North America? Is the rainfall they receive heavy or light? Are open forests generally in mountainous or in level country?

Why is there little or no vegetation in the land along the Arctic Ocean (Fig. 30)? How do you account for the desert region in the south-west? In the latter district the soil is so parched and sandy that nothing grows except a



FIG. 30—An Eskimo "Topick" on the Telzoa River

few stunted bushes; the land cannot be cultivated except by irrigation. (See page 74, Part I.)

In the Cool and Warm Belts many kinds of grain, fruits and other useful plants are raised. In the wheat or temperate region there are raised also oats, barley, corn, many garden and field vegetables, and such fruits as apples, pears, peaches, plums, cherries, grapes, and berries. In the cotton or warm area are grown also rice, sugar-cane, and southern fruits such as oranges, lemons, and bananas. Between these two regions is that of corn and tobacco, which form the staple products of that part of the country. On the Pacific coast also the fruits of both these regions

grow abundantly, and form an important source of wealth to the people.

Draw a small map of North America, name on it in their proper localities as many forms of vegetation as you can.

Animals. On the Arctic coasts and in the Cold Belt generally are animals with thick fur and oily bodies (Fig. 31). Nearly all are flesh-eating and good swimmers. Why have the polar bear and the seal thick fur? Why is the fur of the bear white and that of the seal grey? The seal has a covering of fine woolly fur next his body, and a smooth coat of long hairs extending through this.



FIG. 31—The Arctic Walrus. Animals of the Arctic realm

The sealskin we generally see in coats and caps is the “fur-seal” of the Pacific, and “plucked,” that is, the long hairs are removed leaving the woolly fur exposed that was underneath. Of what advantage are both these coverings to the seal? The whale has underneath its smooth skin a layer of “blubber” or fat from one to two feet thick. Why is its skin smooth? Why does the animal need a covering of blubber? The eider duck is covered with a thick mass of white, grey and black feathers. Why are the feathers so thick? The bird plucks from its breast down with which it covers its eggs. Why should it need to cover its eggs? Hunters gather the down from the nests—about a quarter of a pound from each—and prepare it for the market.



FIG. 32—CANADIAN WILD ANIMALS

In the forests of the Cool Belt in this continent are the countless numbers of fur-bearing animals of Canada (Fig. 32). These include moose, caribou and other deer, wolves, foxes, beavers, otters, sables, and black, brown, and grizzly bears. None of these animals have as long or close fur as the polar bear. Why? Why do the moose, the wolf, the fox, and the bear live in the forests? Why do the beaver and the otter keep near streams? These forests also abound with birds of prey, like the golden eagle, and with birds hunted for food, such as wild geese, wild ducks, wild turkeys, partridge, quail, and pigeons. The eagle is noted for its great strength, keenness of vision, and rapidity in flight. What use does it make of these features? In what ways are wild geese and ducks suited to life on or near water?

The prairie country at one time contained bisons (mis-named buffaloes) in such great herds that trains had to stop to allow them to cross the railway. Their fur and flesh were so highly prized that they have nearly all been killed off by the hunter. Only a few are now found, the majority of which are in Canada, and these are under the protection of the Government or of private citizens (Fig. 33).

There are very few wild animals in the southern part of the Cool Belt and in the Warm Belt in this continent. Why? The fierce puma, much like a large



FIG. 33—Buffalo at Banff, in the Canadian Rocky Mountain Park



FIG. 34—Rocky Mountain Sheep

cat, and the timid bighorn or Rocky Mountain sheep (Fig. 34), are in the mountainous regions in the west, and the alligator, a large lizard-like reptile, is found in the delta of the Mississippi and in other rivers in the southern part of the continent.

Vast numbers of domesticated animals, such as horses, cattle, sheep, swine, and poultry, take the place of the wild animals that have been driven out, and all these, except the turkey, have been brought from the Old World.

The animals of the Hot Belt in North America are so much like those in the northern part of South America that they will be referred to in the description of the animals of the latter continent.

Valuable food fishes are taken in the ocean waters on both east and west coasts, and in the inland waters, notably the great lakes. The salmon of the Pacific coast, the cod, mackerel, and herring of the Atlantic coast, and the whitefish and lake trout of the inland lakes are the most abundant. Lobsters and oysters are obtained on both coasts of the continent.

History and People. About nine hundred years ago it is believed that daring sailors from the northern coasts of Europe came to the north-eastern coasts of North America and formed some small settlements. But they afterwards went away and nearly all traces of their visit to the New World have been lost. In the year 1492 Christopher Columbus and a few sailors crossed the Atlantic from Spain in three small vessels and once

more made it known that there was a great continent away in the west. (See page 37, Part 1.)

But during the centuries when the American continent was unknown to Europeans it was not without inhabitants. In North America from Hudson Bay to the Gulf of Mexico, on the coast and in the interior, were people who had red skins and long straight black hair, and who hunted wild animals in the dense forests and fished the lakes and streams to get their living. Why did the Europeans call these people *Indians*?

In the cold northern regions the Eskimos lived in their snow huts, ate the fat of the whale, seal, and polar bear, and dressed themselves in sealskins and bearskins about the same as they do now.

In the southern part of North America and in parts of South America were people well civilized, with regular forms of government, large cities, and much wealth in silver and gold. These were the ancient Mexicans of North America and Peruvians of South America.

Then the white man came from Europe and took nearly all the continent from its original inhabitants. Long and bloody wars were carried on with the Indians, Mexicans, and Peruvians, and as a result vast numbers of the natives were slain, and the old tribes almost entirely disappeared from the land. The Europeans who took possession of southern North America and a large part of South America were the Spaniards. To-day the descendants of those Spaniards are living in the same parts of the continent.

The British took possession of the Atlantic Coast from Newfoundland to the Gulf of Mexico and occupied it for nearly one hundred and fifty years. In spite of great difficulties they succeeded in building up comfortable homes for themselves and establishing a number of thriving colonies. Afterwards a war broke out between these colonies and the mother land, in which the former were successful and they together became an independent nation called the United States of America. This nation, after a history of considerably more than one hundred years, occupies the whole central portion of the continent. Its people are largely of British descent, but many Germans, Italians, French, and other Europeans are to be found there.

In the south-eastern part of the United States are many Negroes, or people descended from the inhabitants of southern and central Africa. During the seventeenth and eighteenth centuries many native Africans were torn from their homes, carried across the Atlantic in miserable vessels, and sold as slaves to American cotton planters, and other wealthy citizens. They and their descendants were kept under harsh treatment until only about forty years ago when the United States Government, after a severe civil war, forced the southern people to make them free. They



FIG. 35—Montezuma

are now slowly becoming educated, and some are entering different lines of business and even the learned professions.

The French took possession of the country along the St. Lawrence River and the Great Lakes. Here they carried on the fur trade for over a hundred and fifty years, until in a war with the British they were defeated and forced to give up their territory. This was in 1763, and the British have not only held this part of the continent ever since, but have extended their possessions to the Pacific Ocean, forming what is now called the Dominion of Canada. Many descendants of the French settlers live in Canada, especially along the St. Lawrence River, and still speak their own language, but the majority of the population of Canada are of British descent.

Many British colonists left their comfortable homes in what is now the United States, after these States became independent, and settled in Canada, which was at that time for the most part a wild forest. These were called United Empire Loyalists. Many of the people of Canada to-day are proud to call themselves descendants of those old heroes.

During the last fifty years numbers of Chinese have come across the Pacific Ocean and settled in different parts of North America. They are most numerous on the Pacific coast, but nearly every city and very many towns have small colonies of these queer people.



FIG. 36—Champ'ain, the founder of Quebec

The population of North America now numbers nearly one hundred and ten millions, of which Canada has about six millions, and the United States about eighty millions, and Mexico about fourteen millions.

Subdivisions. Study the colored map of North America (Fig. 23).

What large country occupies nearly the whole of the northern half of the continent? This is our own country, and it forms an important part of the great British Empire. What is meant by the *capital* of a country? What is the capital of Canada? On what river is it? Into what other river does this flow?

Find the island of Newfoundland. It is also a part of the British Empire, but is not a part of Canada. It has a

government and a capital of its own. What is its capital? (See map). What strip of country extends along the coast immediately north of Newfoundland? This belongs to the island and is valuable to it because of the seal and other fisheries carried on there.

What large country lies south of Canada? How does it compare with Canada in size? Find on the map and name its capital. At the north-west of Canada is a smaller territory. What is its name? It was purchased by the United States in 1867 from Russia (a country of Europe).

What country is south of the United States? What is its capital? Of what nationality are the greater number of its people?

By what name is the part of the continent south of Mexico known? It is made up of several small independent republics.

What group of islands lies east of the Gulf of Mexico, partly surrounding the Caribbean Sea? Two of these Islands, Cuba and Haiti, are independent, and the others are possessions of Great Britain and the United States, also of France, Holland, and Denmark (countries of Europe). Each has its capital or chief town.

The islands of Greenland and Iceland, in the north-east, are often called Danish America. Why? They are of little value except as stations for whaling and sealing vessels, that carry on their business in the northern waters.

Draw a small map of North America and on it mark the countries and their capitals.

THE DOMINION OF CANADA

Position and Extent. As we have already seen, our country occupies nearly all the northern half of North America (Fig. 38).

What ocean lies east of Canada? What British colony lies between Canada and the ocean?

What ocean is at the north? The northern part of Canada consists of a large group of islands that are covered with ice and snow all the year round, scarcely explored even along their coast-line, and inhabited by only a few wandering Eskimos.

What ocean lies west of Canada? What territory of the United States separates the north-eastern part of Canada from the ocean?

What large country borders Canada on the south? What group of lakes lies along the southern boundary? What river drains them? Into what does it flow? Find a portion of this river on the boundary line. The line between western Canada and the United States is a parallel of latitude; try to find out which.

Calculate by a study of the map of Canada and the scale on which it is drawn what are the greatest length and breadth of the country.

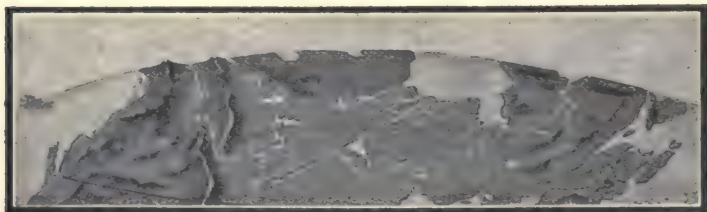
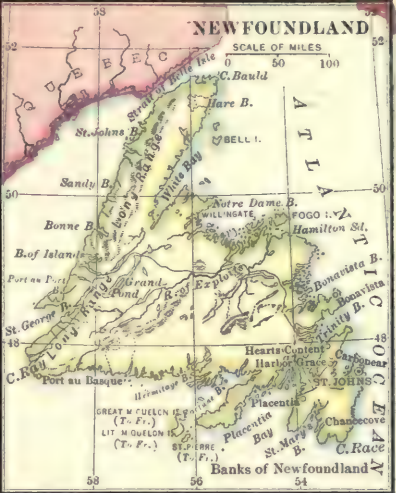


FIG. 67—Bird's-eye View of Canada, looking from the south. Notice the curve of the surface



NEWFOUNDLAND

SCALE OF MILES
0 50 100



80 70 60 50

from Chicago Greenwich 80 70



FIG. 39.—The Three Sisters. Canmore. Alberta. part of the high Rocky Mountain Ranges

The total area of Canada is a little more than three and a half million square miles.

The length of the line separating Canada from the United States is about 3,000 miles, and of this 1,400 miles is a water line, that is, made up of rivers or lakes.

It takes a railway train just about a week to make the journey across Canada, from ocean to ocean, travelling night and day (Fig. 37).

Surface. Canada has parts of the three mountain systems of North America—the Rocky, the Laurentian, and the Appalachian.

The Rockies consist in Canada of several chains more or less parallel, their total width being from four hundred to five hundred miles. Along the shore of the Pacific extends the Coast or Cascade Range, containing at its northern end the peaks of St. Elias (18,024 ft.) and Logan (19,500 ft.), the highest in Canada. The Rocky Mountains proper form the eastern side of the system (Fig. 39).

Nearly the whole of the Laurentian system is in Canada. All this region is wild and rocky, dotted with innumerable small lakes, watered by many mountain streams, and almost entirely covered with forests.

That part of Canada south of the St. Lawrence is Appalachian in formation. The chief mountains are the Notre Dame, extending to the mouth of the river (Fig. 40).

The land stretching from the Rockies to the Laurentian highlands is the northern part of the great Central Plain



FIG. 40—Gaspé Basin, on the Gulf of St. Lawrence, at the eastern end of the Notre Dame Mountains

of North America. In what direction does it slope in the north? in the south? Most of the southern part of this plain is prairie land and is one of the most fertile parts of Canada. Trace on the map the ridge separating the waters flowing into Hudson Bay from those flowing into the Mississippi.

Climate and Rainfall. In what heat belts is Canada? Trace on the map of Canada the line separating these belts. Where is it farthest south? Where is it farthest north? How do the parts into which it separates the

country compare with each other in size, in surface, and in suitability for agriculture?

The heat of southern Canada varies greatly throughout the year. The winters are usually cold, while the summers are warm, and in some places often very hot. The north-eastern shores of Canada are colder than the western in the same latitude. This is due partly to ocean currents that flow past both shores, cold ones in the Atlantic and warmer ones in the Pacific.

The prevailing winds in summer over eastern Canada are the return trade winds which blow from the south, south-west, and west over the United States and Canada. These carry with them a large amount of moisture from the equatorial regions. Part of this is given up in the heavy rainfall of the southern United States, but a large amount is retained to be let fall over southern and eastern Canada. In winter the winds blow from the north and north-west and cause large quantities of snow to fall.

The warm moisture-laden winds from the Pacific blow against the high mountain barriers of western Canada throughout the year, making the rainfall along the coast the greatest, and on the eastern slopes of the Rockies the least, in the Dominion. State reasons why.

Drainage—*The St. Lawrence Basin and Atlantic Slopes.* Trace your pencil on the map of Canada around the basin of the St. Lawrence. The great lakes and part of the river are on the United States boundary line, and so the basin is in both countries, the larger portion being in Canada. Parts of the basin are the oldest, most thickly settled, and prosperous parts of the Dominion.

Name the five great lakes in the upper part of the basin. Which one is entirely in the United States? What large lake-like bay is at the east of Lake Huron? What

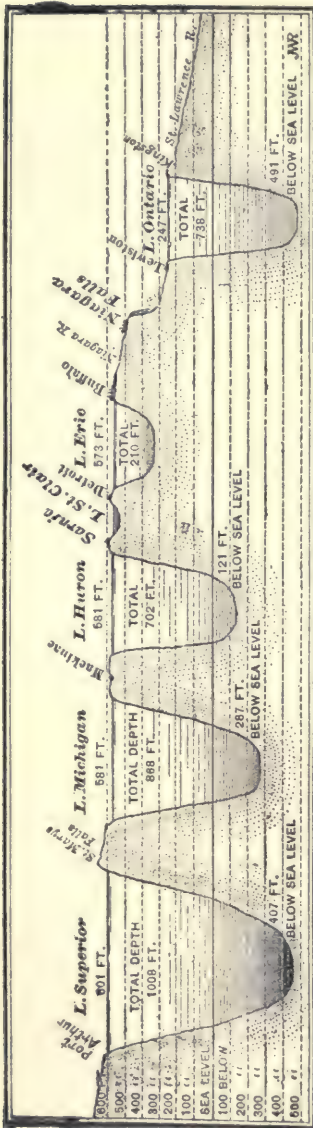


FIG. 41—A Section along the Great Lakes

smaller lake is drained into Lake Superior? What are the two largest lakes drained into Georgian Bay? What small lake lies between Lake Huron and Lake Erie? Name all the rivers that connect these lakes with one another. Name the chief tributaries of the St. Lawrence from the north and south. (See map of the Province of Ontario.) The diagram (Fig. 41), shows the comparative depths of the Great Lakes, and the relation of the lakes to sea level.

Lake Superior is the largest body of fresh water in the world. Its inlet at the western end is the River St. Louis, which forms the head stream of the St. Lawrence system. The north shore of the lake is high and rocky, and the south lower and more sandy. Iron, copper, gold, silver, and other minerals abound on its shores. Its waters are clear and full of valuable salmon trout, and whitefish.

River St. Mary, the outlet of Lake Superior, is navigable throughout its length except at the town of Sault Ste. Marie where there are rapids. Canals have been constructed around these rapids on both Canadian and United States sides of the river.

Lake Huron receives the waters of Lake Superior and Lake Michigan. It has the most uneven coast line and the greatest number of islands of the great lakes. Name its largest island and its largest bay. The white-fish and salmon trout fisheries on this lake are very large.

Lake Erie is the shallowest of the five great lakes, and is noted for sudden and dangerous storms. The greater part of its trade is carried on along the southern shore, and several large cities have grown up there.

The Niagara River issues from Lake Erie as a broad navigable stream, and after a course of six or seven miles it divides to enclose Grand Island. A little below this large island the current increases in swiftness, violent rapids are formed, and then the whole stream plunges over a rocky precipice about 160 feet high, forming the world-famed Falls of Niagara.

These magnificent falls are about three-quarters of a mile wide, and are divided into two parts by Goat Island, the wider and slightly lower "horseshoe" fall being on the Canadian side. Then for another six or seven miles the river rushes with foaming waters through a deep gorge, (Fig. 42), at one point in which it takes a sharp turn to form the "whirlpool." After emerging from the gorge the river flows with smooth and rapid course to its outlet into Lake Ontario. The rapids and falls in this river are overcome for navigation by the Welland Canal (Fig. 43), which passes through the "Niagara Peninsula" of the Province of Ontario.

Lake Ontario is the smallest of the Great Lakes (not counting Lake St. Clair), but is one of the most important for commerce. A large amount of trade passes over it from the upper lakes, and it is bordered on both Canadian and United States sides by thickly settled and flourishing agricultural country. Many large cities, such as Toronto, Hamilton, Kingston, and Rochester (U.S.), and nearly a score of towns are situated on or near it.

From Lake Ontario the stream flows on as the St. Lawrence River, and after a course of about 750 miles it enters the Gulf of St. Lawrence. For the first fifty miles the river decreases in width from ten to two miles, and this part is known as the Lake of the Thousand Islands. It contains probably two thousand islands varying in size from a small rock jutting out of the water to two which are large townships of one of the Ontario counties. Many of the smaller islands, which are justly famed for their beauty, are built up with summer residences, hotels, and parks, and are favorite resorts for tourists.

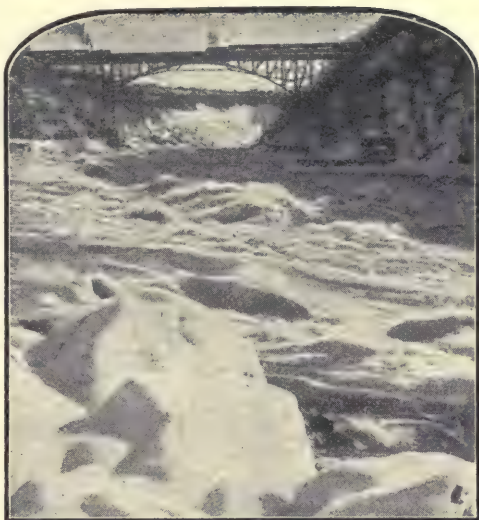


FIG 42—Whirlpool Rapids in winter. Looking through the great gorge to the railroad bridge, Niagara Falls, Ont.



FIG. 43—The Welland Canal, showing a lock with vessel passing from Lake Ontario to Lake Erie

Montreal, and the river has been deepened at Lake St. Peter to allow ocean vessels to come up to that city. The mouth of the river has a width of about forty miles. Near what city does it begin to increase in width? Name as many cities and towns on its banks as you can. The whole course of the St. Lawrence waters from the sources of the St. Louis to the Gulf is about 2,300 miles.

The country sloping from the Laurentian highland to the Atlantic contains two large river systems, the Koksoak and the Hamilton. They are of little value commercially. Why? What is probably one of the greatest waterfalls in the world is the Grand Falls on the Hamilton River, where the whole body of that great stream leaps over a cliff



FIG. 44—A Steamer running the Lachine Rapids

The rapids of the St. Lawrence begin a few miles below the town of Prescott and extend at intervals as far as Montreal. Probably the most dangerous of these are the Lachine rapids near Montreal (Fig. 44), but the most stormy are the Long Sault just west of Cornwall, and the Coteau and Cedars farther down the river. Passenger and other steamers can safely pass down all the rapids, but in coming up stream must pass through the canals along the shores.

There are several lake expansions and many islands in the course of the river. On one of the islands is situated the city of



FIG. 45—The Victoria Bridge across the St. Lawrence River, Montreal, Que.

300 feet high. The Hamilton River forms part of the northern boundary of the province of Quebec.

The Atlantic slope from the Appalachian system extends into Canada in the south-east. The St. John is the largest Canadian river in that slope, and is of great value in the lumber trade. What city is at its mouth?

Drainage. *The Hudson Bay Basin.* The main depression in Canada is that which surrounds Hudson Bay. Trace your pencil on the map of Canada around this basin. Where does it extend into the United States? Where is its extreme western limit? Name all the large rivers which flow into Hudson and James Bays. All these rivers are rough mountain torrents, unfit for navigation. In what ways may these rivers become of great value? How do you think, from their appearance on the map, they compare with the Ottawa river in length and in size? What Hudson's Bay Company ports are situated near the mouth of the Nelson and at the mouth of the Churchill rivers? Name those which bound Ontario and Quebec on the north.

Name the largest lake in the basin. How does it compare in size with Lake Ontario? It is comparatively shallow, and at its southern end it is swampy. Several

settlements of Icelanders are on its western shores and some Indian reserves on the east and north. What river drains it? What great river flows into it near its northern end? What one flows into it at its southern end?

The Saskatchewan and Red Rivers flow through a level fertile country, and are important commercial highways. The former is navigable for flat-bottomed boats for seven hundred miles from Lake Winnipeg, the chief drawback being a fall of forty-five feet at the mouth of the river. This obstacle is surmounted by means of a horse tramway for conveyance of freight between river and lake vessels. Name all the cities and towns you can on the Saskatchewan and Red Rivers and their tributaries.

Drainage. *The Mackenzie Basin and Arctic Slope.* Trace your pencil on the map of Canada around the basin of the Mackenzie River. What three large lakes does it contain? How does each of them compare in size with the Great Lakes of the St. Lawrence basin? What is the outlet of Athabasca Lake, and into what does it empty? What large river enters the Mackenzie from the west below (west of) Great Slave Lake? What two large rivers join the Mackenzie waters at the western end of Athabasca Lake?

Why is very little trade conducted on Great Slave and Great Bear Lakes and the lower Mackenzie? The Peace River is navigable for large boats from the foot of the Rockies to its mouth (500 miles) and drains a vast area of country that is believed to be capable of great development for agricultural purposes.

Determine the distance the water flows from the source of the Peace River to the mouth of the Mackenzie (Fig. 46). How does this distance compare with the lengths of such other Canadian rivers as the Saskatchewan and the St. Lawrence.

The Mackenzie River was named after its discoverer, Sir Alexander Mackenzie, who explored western and north-western Canada, 1789-93. He was afterwards knighted as a reward for his services and for the hardships he had endured.

What rivers empty into the Arctic Ocean east of the Mackenzie? Why are they unimportant commercially?

Drainage. *The Pacific Slope.* Trace on the map of Canada the ridge between the streams flowing into the



FIG. 46—Indian Hut near the mouth of the Mackenzie River

Pacific and those of the basins farther east. Name the principal rivers of the Pacific slope in Canada. Which one, partly in Canadian territory, is the longest? Determine its length. Many of the rivers of this slope rise from glaciers, and are of the mountain-torrent type with clear cool waters.

Along the banks and in the beds of the Yukon, the Fraser, and the Columbia and their tributaries rich deposits

of gold have been discovered in recent years. The other rivers of British Columbia are valuable because of their fishing and lumbering industries.

Coast Features. What large gulf lies at the south-eastern corner of Canada? (Fig. 47.) What large island borders it on the east? What strait separates the island from the mainland? Newfoundland is a British possession, but does not form part of Canada.

In the north and south of the Gulf of St. Lawrence are two islands of about the same size. Name them. The one at the north is rocky, barren, and virtually uninhabited; the one at the south has fertile soil, a delightful climate, and is so densely populated that it is a province of the Dominion of Canada.

What peninsula lies south of Prince Edward Island? What island is east of Nova Scotia? This island forms part of the Province of Nova Scotia. What bay lies north-west of Nova Scotia?

What very large bay lies directly north of the Great Lakes? It is navigable from the middle of June until the



FIG. 47—Percé (pierced) Rock, Gulf of St. Lawrence

end of October, but during the winter season drift ice obstructs vessels. What bay is its southern projection? By what strait is Hudson Bay connected with the Atlantic? What bay is on the south coast of the strait?

The islands and peninsulas along the northern shores of Canada extend to within a distance of five hundred miles from the north pole. They constitute the District of Franklin, named in honor of Sir John Franklin, a gallant English naval officer and explorer who perished in 1847 while on an expedition among these islands in search of a "north-west passage" to India.

What bay and strait separate the islands of Northern Canada from Greenland? The bay is open for two months in the year, and has important whale and seal fisheries.

What large island is at the south-west corner of Canada? It is the largest island on the whole western coast of the continent of America. What group of large islands lies a little farther north near the coast? The islands north of the latter form part of the territory of Alaska and belong to the United States.

Compare the Pacific coast of Canada with the Atlantic as to length of coast line and number of islands.

Government and Subdivisions. Canada is one of the most important colonies of the British Empire. It is self-governing, with its system of government modelled after that of the Mother Country. Laws are made by a Parliament of two Houses (the House of Commons and the Senate) and a Governor-General, the latter assisted or advised by a committee of statesmen called the Cabinet or Ministry, selected from both Houses (Fig. 48). What city is the capital of Canada? Where is it situated?

The more thickly settled portions of Canada are arranged into subdivisions called *Provinces*. Their names



FIG. 48—View in the City of Ottawa, showing the Post-office and bridges over the Rideau Canal in the foreground, and the Parliament Buildings in the distance

are Nova Scotia, New Brunswick, Prince Edward Island, Quebec, Ontario, Manitoba, Alberta, Saskatchewan, and British Columbia. Find these on the map and name and locate the capital of each. Which is the largest province? Which is the smallest? How does our own province rank in size? The provinces of New Brunswick, Nova Scotia, and Prince Edward Island are often spoken of as the "Maritime Provinces." Can you tell why? Might the name "Maritime" be applied to any other province of the Dominion? A suitable name for these eastern provinces is "Atlantic Provinces."

Each province has a Government somewhat similar to that of the Dominion at Ottawa. It consists of a Legislative Assembly elected by the people for a term not to exceed four years, and a Lieutenant-Governor appointed by the Dominion Cabinet and advised by a Cabinet selected from the party having the majority in the Assembly. Two provinces, Quebec and Nova Scotia, have another House, called the Legislative Council, which corresponds to the Ottawa Senate.

The remainder of Canada, nearly one-half of the whole, is subdivided into four *Districts* and one *Territory*. These are all to a greater or lesser extent under the direct control of the Dominion Government. Their names are: Districts of Mackenzie, Keewatin, Ungava, and Franklin, and Territory of Yukon. Find them on the map.

The district of Keewatin is under the supervision of the government of Manitoba. The other three districts are administered directly by the Dominion Government. Yukon is under a Commissioner acting under the direction of the government at Ottawa, and aided by an Executive Council of ten members, five of whom are elective. What is the capital of Yukon?

The Canadian People. Four hundred years ago the only inhabitants of Canada were the Indians (Fig. 49), in the forests and on the prairies, and a few Eskimos on the northern coast. After Europeans took possession of the country the Indians gradually decreased in numbers, till there are now not quite 110,000 in all Canada. The government has set apart "reserves" for the Indians in



FIG. 49—Indian Gathering in Alberta

every province and in several of the districts, where more than three-fourths of them have settled to do agricultural and other work. The Eskimos in Canadian territory do not number more than 4,000 (Fig. 50).



FIG. 50—Eskimo Girl and Child

is about thirty per cent. of the total, and nearly all are native Canadians.

A large portion of our country is peopled by Canadians of British origin. Many of these are descended from the United Empire Loyalists who came to Canada more than a century ago. From where and why did they come? The provinces of Ontario (then Upper Canada) and New Brunswick received them in largest numbers. Manitoba and the new provinces of the



FIG. 51—French Habitant

North-West have been peopled chiefly from the eastern provinces, although many settlers from Europe, the United States, and other countries are taking up land there.

Chinese people also are distributed throughout the cities and large towns of Canada, and are numerous in British Columbia. A tax of \$500 is levied by the Dominion government on every Chinese immigrant.

The census of Canada is taken every ten years. In 1901 the population was found to be 5,371,315.

Each province controls its own educational affairs. All the provinces have efficient systems, and Canada is unsurpassed by any nation in the world in educational advantages. There are about 20,000 primary and secondary schools (public, separate, high, and private) throughout the Dominion, with more than a million students, and seventeen Universities with about 7,000 students. The largest Universities are Toronto (Toronto), McGill (Montreal), and Laval (Quebec). Many other educational institutions are conducted, such as agricultural and dairy schools, medical schools, art schools, public libraries, colleges of music, and schools for deaf mutes and the blind.

What would you consider the chief occupations of the people in the mountainous districts of British Columbia? On the river mouths of British Columbia? On the fertile plains of Alberta and Saskatchewan? In the forests of northern Ontario? Along the shores of Nova Scotia?

The principal productive industries in Canada are *agriculture* (including fruit-growing, dairying, and stock-raising) in the cleared and fertile localities, *lumbering* in the forest regions, *mining* in the mountainous districts, *fishing* along the coast of the oceans and on the great lakes, *hunting* and *trapping* in the vast northern forests, and the many forms of *commercial* work everywhere in the settled parts of the country. What is meant by a *pro-*

fessional man? What kinds of work are done by the *laboring* classes?

The grain fields of Manitoba and the North-West are very extensive and give a large yield per acre. At harvest time portions of the country stretching for miles are covered with waving wheat. This the farmers reap and thresh on the field, sometimes several steam threshers being seen at work within a radius of a mile or two. Some of the finest wheat in the world is grown on the prairie land, with a hard grain especially valuable for flour-making, and mixing



FIG. 52—Western Farming Scene. Cutting Wheat

with softer qualities. For this reason a ready market is found for it throughout Canada, and in Great Britain and even the United States. Find on the map the cities of Regina and Winnipeg, and the town of Brandon. They are important shipping centres for grain (Fig. 52).

Oats, pease, barley, rye, and other grains are raised in much the same parts of Canada as wheat.

Many varieties of apples are grown throughout Canada, some of the choicest kinds coming from the southern valleys of British Columbia, southern Ontario, and Nova Scotia (Fig. 53). Usually the fruit is packed in barrels and



FIG. 53—Orchard Scene, Nova Scotia

sold on the home markets or carefully packed for exportation. Sometimes, however, the apples are peeled, sliced, and dried or "evaporated" on large trays in buildings fitted up for the purpose, and much fruit of all kinds is cooked and canned, and is largely in demand both at home and abroad. Great Britain and Germany are the principal countries to which our apples are exported.

Large quantities of berries, plums, and cherries are raised in southern Ontario, southern Quebec, and the Maritime Provinces. In Ontario at the western end of Lake Erie and along the southern shore of Lake Ontario are immense peach and grape farms which yield excellent varieties of these fruits.

Stock-Raising and Dairying. In southern Alberta, where the rainfall is not quite enough for successful farm-



FIG. 54—A Horse Ranch in Alberta

ing, a leading industry is *ranching*. The plains are covered with stock farms called *ranches*, each one several square miles in extent, on which large herds of cattle, horses, and sheep are raised (Fig. 54).

The animals live on the grass of the prairie land, a common variety of which is called *bunch-grass*, growing in clumps or bunches, rather coarse, but good for food. The cowboys in charge of the herds are expert horsemen, and have their ponies well trained for the different kinds of work to be done.

In all parts of Canada where farming is carried on, large numbers of horses, cattle, sheep, and hogs are raised for domestic purposes and for home and foreign markets. In some cases small stock farms are managed, and shipments



FIG. 55—Cheese Factory and Creamery, Black Creek, Ont.

of these animals are sent out of the country by dealers who purchase the stock from the farmers.

The products of the ranches and stock farms include live animals, meats, and hides and skins. Great Britain is our chief purchaser of all these articles.

Our country is rapidly becoming noted as a dairying country (that is, one producing cheese, butter, milk, and cream). In nearly all the provinces dairy schools (where young men learn how to make butter and cheese), have been busy and prosperous. Creameries, where butter is made for both home and foreign markets, have been established in many places (Fig. 55). The dairy products of Canada are the best on the American continent and equal the best in Europe. Ontario and Quebec are the leading provinces in dairying industries. Nearly all our butter and cheese not used at home is sent to Great Britain in vessels fitted with cold storage apartments.

Lumbering. Name the provinces and districts that have forests. Why are there no forests in the Prairie Provinces? Why are there none in south-western Ontario?

At one time all eastern Canada from Lake Superior to the Atlantic Ocean was covered with forest. In the time of the French rule very little clearing was done so as not to interfere with the fur trade. When the British settlers came they began to prepare the country for farming, and soon the forests disappeared except where small woods were allowed to remain. What uses do farmers make of the woods on their farms?

By far the most valuable forests of Canada and of all North America are in British Columbia. Nearly all the trees are of the pine, spruce, and tamarack varieties, and in many cases grow to be of enormous size. The Douglas spruce is often 300 or 400 feet high—much higher than



FIG. 56—British Columbia Lumber, 36 x 36 in.—60 ft.

our tallest church steeples—and more than ten feet through at the base. Because of its tough and straight fibre it is much used for masts of ships and frames of houses and bridges. Centres of British

Columbia's lumbering trade are the cities of New Westminster and Vancouver (Fig. 56). Find these on the map.

Lumbering is carried on along the rivers flowing into the St. Lawrence (Fig. 57), the Ottawa, and Lake Huron. The cities of Ottawa and Three Rivers have many saw-



FIG. 57—Logs floating in the river near Three Rivers, Que.

mills, and from Quebec and other ports large quantities of square timber is shipped across the Atlantic. Find these three cities on the map.

The other locality in Canada where lumbering is carried on is the province of New Brunswick. The St. John and Miramichi Rivers and their tributaries are natural outlets for the lumber, and the cities of St. John and Chatham are the shipping points. Find them on the map.

Nearly the whole output of the forest industry not used at home, including lumber, square timber, logs, and wood pulp, goes in about equal quantities to Great Britain and the United States.

Mining. Few countries in the world surpass Canada in mineral wealth. Nearly all the known minerals are found in larger or smaller quantities, and her resources of coal, gold, and iron no one can yet estimate. Find on the small map the localities where the chief minerals are found.

The coal areas, as far as known, occupy about 97,200 square miles, but, no doubt, many others yet remain to be discovered. The chief mines are in Nova Scotia, Alberta, and British Columbia. Nearly all the coal is used in the



FIG. 58—Diagram of Minerals



FIG. 59—Blast Furnace at Sydney, C.B.

provinces and districts where it is obtained, and Ontario imports large amounts of coal from the United States. Can you state any reasons why?

The chief *gold* mines are west of the main chain of the Rocky Mountains, in north-western Ontario, and in Nova Scotia. In recent years the greatest product has been from the Yukon Territory and south-eastern British Columbia.

Iron is found in many parts of Canada, both east and west. The chief smelting works (where the metal is extracted from its ore) are in Nova Scotia where coal is convenient (Fig. 59), though there are several smelters in Ontario and Quebec which import coal or use charcoal.

Silver, *copper* and *lead* are obtained in large quantities in British Columbia, and to a smaller extent in Ontario and Quebec. In northern Ontario are rich mines of the rare metals *nickel* and *cobalt*. In the south-western peninsula of Ontario are wells from which *petroleum* and *salt* are taken.

Fisheries. What kinds of fish are sold by fish merchants in our cities and towns? Which are salt-water, and which are fresh-water fish? Those from fresh-water

are caught in the Great Lakes, and the large lakes and rivers of western Canada. Ontario and Manitoba are specially noted for inland fishing. The chief fish taken are salmon trout, whitefish, lake herring, and pickerel. But by far the most important fisheries are those in salt-water, carried on by the Atlantic Provinces and British Columbia.



FIG. 60—Salmon Catch at a Fraser River Cannery

Name the chief kinds of salted fish, dried fish, and canned fish you have seen. Most of these come from eastern Quebec, the Atlantic Provinces, and British Columbia (Figs. 60 and 61). Nova Scotia and British Columbia are far in advance of all the other provinces in the value of their fisheries, the former yielding great quantities of cod, herring, and lobsters, and smaller quantities of haddock, mackerel, and salmon, and the latter enormous catches of salmon. In British Columbia the rivers are filled with salmon in the spring, and these are caught by various methods to supply the numerous canning factories along the river banks.

Lobsters and oysters are gathered along the shores of the Atlantic Provinces. Nova Scotia produces nearly two-thirds the total yield of the former, and Prince Edward Island more than half that of the latter. Some oysters also are found on the Pacific coast.

The fur-seal industry also is considered a department of our fisheries, although the animals are taken because of

their fur. It is carried on in the Pacific Ocean along the coasts of British Columbia, Alaska, and even as far away as Japan.

The government encourages the fishing industry by a *bounty*, that is a gift of a large sum of money, to be distributed amongst the fishermen according to the value of the boats and tackle they use, and the catch they obtain each year.

Fish hatcheries are operated in different parts of the Dominion, and each year hundreds of millions of young fish and lobsters are distributed throughout Canadian lakes and rivers.

The fisheries of Canada are the largest in the world, employing as they do more than 78,000 men with boats, nets, and other implements amounting in value to nearly twelve million dollars. Great Britain and the United



FIG. 61—Drying Codfish in New Brunswick. The codfish are split, cleaned, salted,—and spread out to dry in the sun. They are then packed in bundles or bales to be sent away.

States are the chief purchasers of our fish, though the West Indies and other southern countries take large quantities.

Manufactures. Many of the people of Canada are engaged in manufacturing, and they owe their employment to the great producing industries of the country, such as farming and lumbering. Especially is this the case in the older parts of the Dominion—Ontario, Quebec, and the Atlantic Provinces.



FIG. 62—Flour Milling Plant, Keewatin, Ont.

The most important manufactures of Canada in order of the amount of production are:

- i. Flour and all other articles manufactured in flour mills (Fig. 62).
- ii. Lumber and all other articles manufactured in saw-mills (Fig. 63).
- iii. Machinery of all kinds, including agricultural implements, engines, stoves and other foundry-made goods, and carriages.
- iv. Leather, and leather goods.

Other articles are cotton and woollen goods, cheese and butter, liquors and tobacco, furniture, wood-pulp, and canned goods (fish, meats, and fruits).



FIG. 63
A Sawmill
at
Midland, Ont.

Large quantities of spruce, poplar, and basswood are taken from the eastern forests of Canada to be



ground or prepared chemically into wood-pulp (Fig. 64), for the manufacture of paper, tubs, pails, and many other

articles. Probably the greatest spruce forest in the world extends through northern Canada from New Brunswick in the east to the Yukon in the north-west. Canada's supply of pulp-wood is, therefore, practically inexhaustible.



FIG 64—Pulp Wood

Throughout Ontario, Quebec, New Brunswick, and Nova Scotia, there are thirty-five large mills producing nearly 800 tons of pulp per day. The largest and best equipped mills in Canada are on the St. Maurice River in Quebec and at the town of Sault Ste. Marie in Ontario.

Trade and Commerce. We owe much to outside nations, not only because they provide us a market for our timber, cheese, and wheat, but also because of the many articles we import from them for our everyday use. Name any articles you can that may be made into clothing or used as food, which we obtain from distant lands.

Fully nine-tenths of the foreign trade of Canada is carried on with Great Britain and the United States. The next countries in order are Germany, France, Belgium, Newfoundland, and Japan.

Very large vessels cross the Atlantic to Great Britain, and other European countries, and cross the Pacific to Japan, China, and Australia. We sometimes speak of the *tonnage* of a vessel, by which we mean the weight of goods in tons which it can carry. The seaports of Canada, where the greatest total tonnage of vessels enters or leaves, are 1. Montreal (Fig. 65), 2. Victoria, 3. St. John, 4. Halifax, 5. Quebec, 6. Vancouver. Find all these cities on the map of Canada. Which of them probably conduct trade with European countries, and which with Japan, China and Australia?

The many large lakes and rivers of Canada afford splendid means of inland navigation. Reference has already been made to the value of the Saskatchewan and Peace Rivers in this respect. The St. Lawrence River system is navigable for ocean vessels up to Montreal, and, with the aid of canals around the rapids and falls, for smaller vessels to the head of Lake Superior. Much trade is carried on

between the numerous ports on the Great Lakes, both in Canada and between Canada and the United States.

The chief canals along the St. Lawrence trade-route are the Sault Ste. Marie Canal beside the St. Mary River, the Welland Canal between Lakes Erie and Ontario, and the St. Lawrence Canals at several places along the St. Lawrence River between the town of Prescott and the city of Montreal. What rapids or falls are overcome by each of these canals? Other canals have been constructed around the rapids of the lower Ottawa River, across the country between the cities of Ottawa and Kingston (the Rideau), and part of the way from Georgian Bay to Lake Ontario (the Trent Valley) (Fig. 66).



FIG. 65—Montreal Harbor

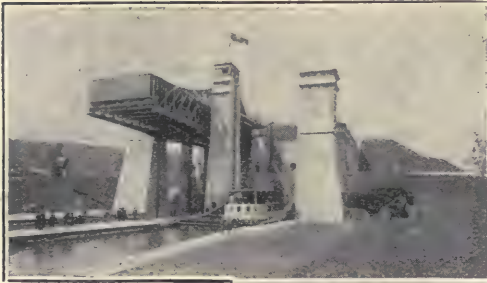


FIG. 66
The Lift Lock, Peterboro,
Ont.

Canada has more than 20,000 miles of railways, and new lines are constantly being constructed. The



chief are the Canadian Pacific, the Grand Trunk, the Grand Trunk Pacific, and the Intercolonial Railways.

The Canadian Pacific Railway (C.P.R.) has more than 8,000 miles of road. It commences at Vancouver on the Pacific coast, passes through the cities of Winnipeg and Montreal, and the State of Maine in the United States, and terminates at St. John, N.B., on the Atlantic Coast. It has several important branches in all the Provinces which it traverses. Name these.

The Grand Trunk Railway System (G.T.R.) is the pioneer railway of Canada with a total mileage of nearly 5,000 miles, 3,000 miles of which are in Canada. It begins at Chicago in the United States, enters Canada, through a tunnel under the St. Clair River, at the town of Sarnia (Fig. 67), passes through London, Hamilton, Toronto, and Montreal, and then runs south-eastward out of Canada to the City of Portland on the Atlantic Coast. Its Canadian terminus is at Point Levis, opposite the City of Quebec. It has many branches in Ontario and Quebec.



FIG. 67—Grand Trunk Railway Tunnel under the
St. Clair River, Sarnia, Ont

The Grand Trunk Pacific, the new national

highway now being built from the Atlantic to the Pacific, traversing the great forests and future fields of New Ontario, the vast wheat fields of Manitoba, Saskatchewan and Alberta, the Peace River country and the North Pacific Coast, adds immensely to the resources and capabilities of Canada.

The Intercolonial Railway (I.C.R.) runs from Montreal, first north-eastward and then south-eastward, to Halifax and Sydney in Nova Scotia. It has several branches in New Brunswick and Nova Scotia, so that its total length is a little over 1,300 miles. It is managed directly by the Dominion Government.

There are other important railways, such as the Canadian Northern (1,400 miles), from Lake Superior north-westwards,



FIG. 68—Incline Railway, Hamilton, Ont.

and the Canada Atlantic (more than 450 miles), across south-eastern Ontario from Georgian Bay, besides many smaller lines for the conveyance of local freight and passengers. Every city also has its electric railways for rapid communication with the surrounding districts and places of interest.

Trace these lines of railway on the map of Canada, and name some of the larger towns and cities on each. Name as many great railway centres as you can find, and also the most important terminal points.

Cities and Towns. In the map of the Dominion (Fig. 38), the positions and relative sizes of the cities and

towns of Canada are shown. What province has the largest number? What river basin has the largest number? How do you account for the great number in this particular part of the Dominion?

What is the capital of Canada? What are the capitals of the nine Provinces, and Yukon Territory? What three places have you learned are important grain centres? What five lumbering centres? What two mining centres? What places have important manufactures of wood-pulp? What are the six chief seaports of Canada?

According to the census of 1901 (see Appendix), Canada had more than one hundred cities and towns whose population exceeded 2,500. Of these twenty-four had over 10,000 each, and two over 200,000 each. Name these two largest cities.

Draw a map of Canada and mark in it the boundaries of the provinces and districts, the capitals of these, and the other large cities.





FIG 70—The Grand Falls, St. John River, N.B.

The Atlantic Provinces. The provinces of Nova Scotia (including Cape Breton), New Brunswick, and Prince Edward Island, are closely associated together in history and in political and commercial life. They occupy ridges, valleys, and slopes of the Canadian Appalachians. Find on the map the names of their principal coast features.

The climate of these provinces is healthful, New Brunswick having cold winters and warm summers, the other two having more equable seasons. How would you account for this difference? Nova Scotia is a little warmer throughout the year than Prince Edward Island. In what way do the sea waters and breezes contribute toward this result? Account for the moderate rainfall and abundant snowfall in these provinces.

What is the largest river of New Brunswick? A large proportion of the inland trade of the province is conducted on this river and its tributaries. Where does it rise?

Shortly after entering the province the whole body of water is precipitated over a mass of rock nearly eighty feet high (Fig. 70), and then it rushes with great fury through a deep gorge, in which logs and other floating material become almost hopelessly wedged. What river empties into the Bay of Chaleurs? It is noted for its excellent salmon fishing. The Miramichi river-system in the east is of great value in the lumber industry.



FIG. 72—Land of Evangeline, Nova Scotia

Nearly all the people are of British descent, the Scottish element predominating in Nova Scotia. Prince Edward Island, though the smallest province in Canada, is the most densely populated, having about 52 persons to the square mile.

Agriculture is successfully carried on in all three provinces, particularly in Prince Edward Island and near both shores of the Bay of Fundy. The grain, small fruits, and apples of the valley of the Annapolis River, in western Nova Scotia, are justly celebrated (Fig. 72).



FIG. 73—Halifax Harbor and Shipping

Lumbering is one of the chief industries of New Brunswick. Much of the central and northern part of the province is covered with forest, and all the rivers and streams are used as outlets for sawlogs, or for water-power in saw-mills. Products of the forest make up more than sixty per cent. of the exports of the province.

The *fisheries* of the Atlantic Provinces are by far the most valuable in Canada. Which province leads in this industry? What peculiarity of coast line is there in this province to encourage shore fishing? What are the various kinds of fish taken?

Mining is an important industry. The richest coal mines are along the north shore of Nova Scotia and in Cape Breton. Iron also is found extensively in the coal regions, and the combination of the two in the same locality makes them doubly valuable. The town of Sydney, in Cape Breton, and Pictou, on Northumberland Strait, are the centres of the coal-mining and steel manufacture of Nova Scotia. Gold occurs in the rocks along the Atlantic coast of Nova Scotia and is mined in paying quantities. Gypsum, from which plaster of Paris is obtained by heating, is found in the two mainland provinces.

All three provinces, and especially Nova Scotia, carry on extensive *shipping*, and until steel took the place of wood, *ship-building* was an important industry. It is now confined to fishing vessels, which are noted for their elegance and speed. The harbors are numerous and safe, and every town or village along the shores has, in addition to its fishing popula-



FIG. 74—Dry Dock at Halifax

tion, its sailors, who are engaged in the coasting and foreign carrying trade. The principal railways on the mainland are the Intercolonial and the Canadian Pacific. Prince Edward Island has 209 miles of railway managed directly by the Dominion Government, and has regular communication in summer with mainland ports by steamers, and in winter from Cape Traverse to the nearest point of New Brunswick, nine miles distant, by boats fitted for travelling upon either water or ice. The Government maintains the ice-breaking steamer Stanley to keep open the communication between Point du Chene, near Shediac, N.B., with Summerside, in Prince Edward Island, in the winter time.

Great attention is given to primary education in the Atlantic Provinces by excellent common school systems.



FIG. 75—Map of Halifax and Vicinity

Describe the government of each province.

In Nova Scotia, HALIFAX (Fig. 75), the capital, is the largest city. It is fortified by a citadel, which commands the whole city and entrance to the harbor, and it is the summer station for the North Atlantic squadron of the British navy. The

harbor is one of the finest in America and is open all the year round. There are several lines of steamers between the city and points in Canada, Europe, the United States, and the West Indies *Sydney*, *North Sydney*, and *Sydney Mines* have grown rapidly in recent years because of their coal-mining and iron-smelting works. Their united population in 1901 was nearly 20,000. They are nearer to Europe than any other important port in Canada or the United States. *Glacé Bay*, near *Sydney*, was selected by the inventor Marconi as the American station for wireless telegraphy across the Atlantic (Fig. 76). *Yarmouth*, *Digby* and *Lunenburg* have fishing and shipping industries. *Truro* is a railway centre. *Pictou*, *New Glasgow*, *Spring Hill*, and *Amherst* are centres of valuable coal-mining operations. *Annapolis* is probably the oldest town in the Dominion, having been founded by the French in 1605. It was formerly called Port Royal. It is an important market town of the western agricultural district.



FIG. 76—A Wireless Telegraph Station

In New Brunswick the largest city is ST. JOHN. At the mouth of what river is it? What important trade comes down the river to the city? How does St. John rank among Canadian seaports? It has an excellent harbor, and is a winter port for Atlantic steamers. When the tides on the



FIG. 77—Reversible Falls at St. John, N.B.

Bay of Fundy are at their highest they form a waterfall up stream through the narrow mouth of the river, and when they are at their lowest there is a fall in the opposite direction. (Fig. 77.) It is only when the



FIG. 78—Map of St. John and Vicinity

waters inside and outside the harbor are at the same level that vessels can pass through the narrow entrance. What railway connections has it? The city is well built, and has large manufactures of machinery, iron and steel goods, and lumber. *Moncton*, in the south-east, is the second largest town in the province. It contains the workshops of the

Intercolonial Railway and a large cotton factory. *FREDERICTON*, the capital, is a handsome town. The principal buildings are those of the Government and of the Provincial University. *Chatham* and *Newcastle*, in the north-east, and *St. Stephen* and *St. Andrews*, in the south-west, have large lumbering, fishing, and shipping industries. On what rivers are they? *Woodstock*, *Marysville*, and other towns on the St. John have important lumbering trade.

The only large city in Prince Edward Island is *CHARLOTTETOWN*, (Fig. 79), the capital. It is built on a well-sheltered harbor, and is the railway and business centre of the province. It has wide streets and beautiful



FIG. 79—Map of Charlottetown and Vicinity

residences, public buildings, gardens, and parks. *Summerside* carries on important trade across the strait with New Brunswick and Nova Scotia, and exports large quantities of fish and oysters.

Draw a map of the Atlantic Provinces

and mark on it the chief cities and towns (Fig. 80).

Province of Quebec. What district of Canada is north of the Province of Quebec? What two large rivers



FIG. 80—Outline map of the Atlantic Provinces



FIG. 81—The High Falls, Hamilton River, Ungava. 306 feet high

from part of the Ungava boundary line (Fig. 81)? What territory separates the province from the Atlantic Ocean at the north-east? What large gulf is at the east? What province of Canada is at the south-east? What bay forms part of the New Brunswick boundary? What states of the American Union border the Province of Quebec? What parallel of latitude forms the extreme southern boundary? What province is at the west? What large river forms part of the Ontario boundary? Notice that there is a small



FIG. 82—Chicoutimi, shewing St. Anne, Saguenay River

part of the Province of Quebec on the Ontario side of the Ottawa River. What large bay touches the north-west corner of the province?

In what river-basin is the greater part of this province? Trace your pencil on the map along the ridge separating the basin of the St. Lawrence from the basins of Hudson Bay and the Hamilton River. What mountain system is north of the St. Lawrence? What one is south of it? What mountain range is south of the river in the east?

Why is it colder in winter in Quebec than in Ontario? Why are the rainfall and snowfall heavy in Quebec? What



FIG. 84—Owl's Head in Southern Quebec

are the chief rivers of Quebec flowing into James Bay? Into the Ottawa River? Into the St. Lawrence from the north? Into the St. Lawrence from the south? What lakes form the sources of the Saguenay, Richelieu, St. Francis, Chaudiere, and Rupert rivers? What is the largest lake expansion of the St. Lawrence?

Name three islands in the St. Lawrence River. What important city is on one of them? What large island is in the northern part of the Gulf of St. Lawrence? The interior of this island is for the most part rocky and barren, and it has no good harbors. What group of islands lies south-east of Anticosti near the centre of the gulf? These islands are the centre of valuable fisheries. What two islands are in the Ottawa River above the city of Ottawa?

The resources of this province are many and varied, and give rise to important industries. Generally speaking, the St. Lawrence divides the province into two portions



FIG. 85—Loading Timber for Export at Quebec

which are not like each other. North of the river it is mountainous, rocky, and covered with forest. Farming communities are found only in the valleys and more level regions of the western part of the province near the St. Lawrence and Ottawa rivers, while iron and other minerals and enormous quantities of timber are obtained farther inland among the mountains. South of the river it is mountainous, but in the south-west the land is valuable for farming, and the district is the most densely populated in the province, and is dotted with many cities and towns.

Lumbering is the chief industry in the province. It is carried on along nearly all the large rivers, especially those north of the St. Lawrence and Ottawa. The cities of Hull and Three Rivers have large saw-mills, and Quebec exports large quantities of timber (Fig. 85).

One of the most important industries, for which the forests of Quebec afford inexhaustible material, is the manufacture of wood pulp from which paper is made. Mills for this purpose are numerous throughout the prov-

ince, the largest being at Grand Mère on the St. Maurice River (Fig. 86).

Agriculture is next in commercial importance. Splendid crops of grain are grown in the southern part of the province, fruits are cultivated chiefly south of the St. Lawrence, and stock-raising and dairying are carried on nearly everywhere in the farming districts.

Mining of iron and other minerals along the Ottawa River, valuable *fisheries* on the St. Lawrence River and



FIG. 86—Laurentide Pulp Mills, Grand Mère, Que.

Gulf, and *manufacturing* in Montreal and other cities and large towns give employment to many people.

Nearly all the commerce between Canada and Europe (except that of the Atlantic Provinces), passes through this province. State any that does not. What are the two largest commercial cities on the St. Lawrence?

This part of Canada was first settled by the French, and the names of Jacques Cartier, the discoverer, and Champlain, the first governor, are prominent in connection with its early history.

Twelve counties in the valleys of the St. Francis and Chaudiere rivers south of the St. Lawrence form the

Eastern Townships. This district was nearly all settled by United Empire Loyalists, and therefore its people are of British origin. The majority of the people of the other parts of the province are of French descent and still speak the French language.

Describe the government of the province.

Education is well provided for by a system of common schools, model schools, academies, colleges, and universities. The universities are McGill (provincial) at Montreal, Bishop's (Anglican) at Lennoxville, and Laval (Roman Catholic) at Quebec.

As Quebec is an old and prosperous province it has a large number of cities and towns. The census of 1901 showed that it contained eighty-two places whose population exceeded 1,000. These included the two large cities of Montreal and Quebec, and twelve other cities and towns having from 5,000 to 22,000 people each.

The city of MONTREAL is the largest and chief commercial city in Canada. Its trade was originally due to its position at the junction of the St. Lawrence and Ottawa rivers, but now also to its being at the head of ocean navigation on the St. Lawrence, and an important railway centre. What three great railway systems enter the city? It has



FIG. 87—Jacques Cartier Market, Montreal, Que., and Nelson's Monument in the distance

extensive manufactures of iron, woolen, cotton, fur, and leather goods, and sugar, and has many large wholesale business houses. It is handsomely built between Mount Royal (after which it is named) and the



FIG. 88—Canadian Pacific Railway Windsor Station, Montreal

river, and its cathedrals, churches, colleges, hospitals, and other public institutions have long been famous (Figs. 87 and 88). It is one of the oldest cities of the Dominion, having been founded by Maisonneuve in 1642. There are several large suburban cities, such as *St. Henri*, *Mile End*, *St. Cunegonde*, and *Westmount*, and the total population within a radius of ten miles from the centre of the city of Montreal is over 325,000 (Fig. 89).

QUEBEC (Fig. 90), the provincial capital, was the first French settlement on the St. Lawrence. It was founded in 1608 by Champlain, it was the home of Frontenac and many other gallant governors of French Canada. It was defended by Montcalm and captured by the heroic General Wolfe in 1759, and it successfully resisted in 1775 the attacks of the United States commanders Montgomery and Arnold. Remnants of its old walls and gates are still to

Cedars, Cascade, and Lachine rapids. *Sorel* is a busy manufacturing town. At the mouth of what river is it? *Three Rivers* is a very important lumbering centre. What river joins the St. Lawrence there? *Levis*, opposite the city of Quebec, is a railway centre. From it large quantities of square timber are shipped to Europe. At *Bic*, 200 miles below Quebec, the British mails are landed from incoming, and delivered to out-going, transatlantic steamers. *Murray Bay* and *Tadoussac*, on the north shore of the St.



FIG. 91—The City of Quebec, shewing the Citadel and Dufferin Terrace

Lawrence, are favorite summer resorts. *Chicoutimi* is the chief town in the newly-developing Saguenay country, and is the terminus of a railway from Quebec.

East of Montreal, and in the Eastern Townships, there are many towns which owe their trade to the agricultural and dairying industries near them. *Sherbrooke* is the largest of these. On what river is it? Its fine water power makes it an important milling and manufacturing centre. It has many handsome residences and public buildings. *St. Johns* has iron and leather manufactures and a considerable river trade. On what river? *St. Hya-*



FIG. 92—Outline map of the Province of Quebec

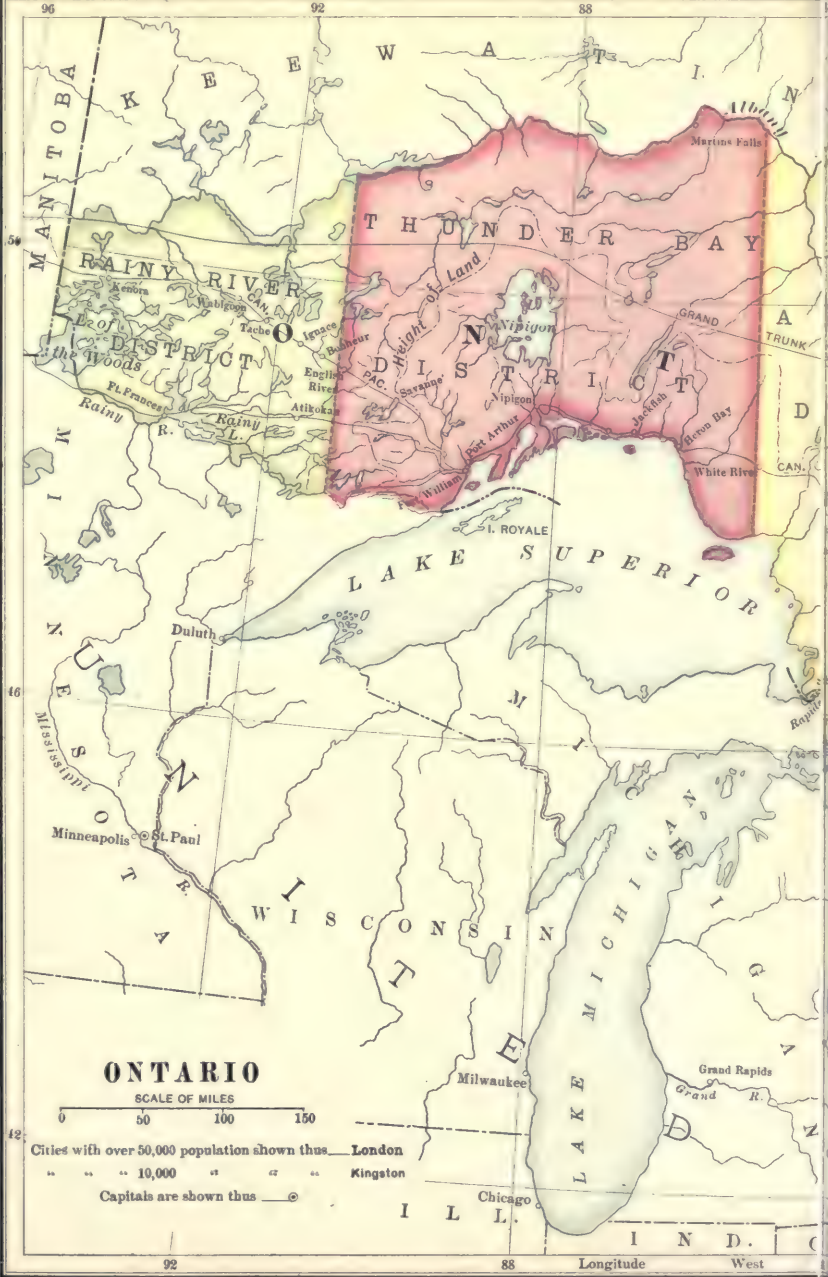
cinthe, Farnham, Waterloo, Drummondville, and Richmond are railway centres and manufacturing and market towns.

Draw a map of the province, and mark on it the principal physical features, and cities and towns (Fig. 92).

Ontario. *Location.* Find the Province of Ontario on the map of Canada. Describe its location with respect to the other provinces and districts, Hudson Bay, the Great Lakes, and the United States. Name the large rivers which separate it from Keewatin and Quebec. Name in order the Great Lakes, and the rivers which connect them.



FIG. 93—A Steamboat Running the Long Sault Rapids



ONTARIO

SCALE OF MILES

0 50 100 150

Cities with over 50,000 population shown thus London

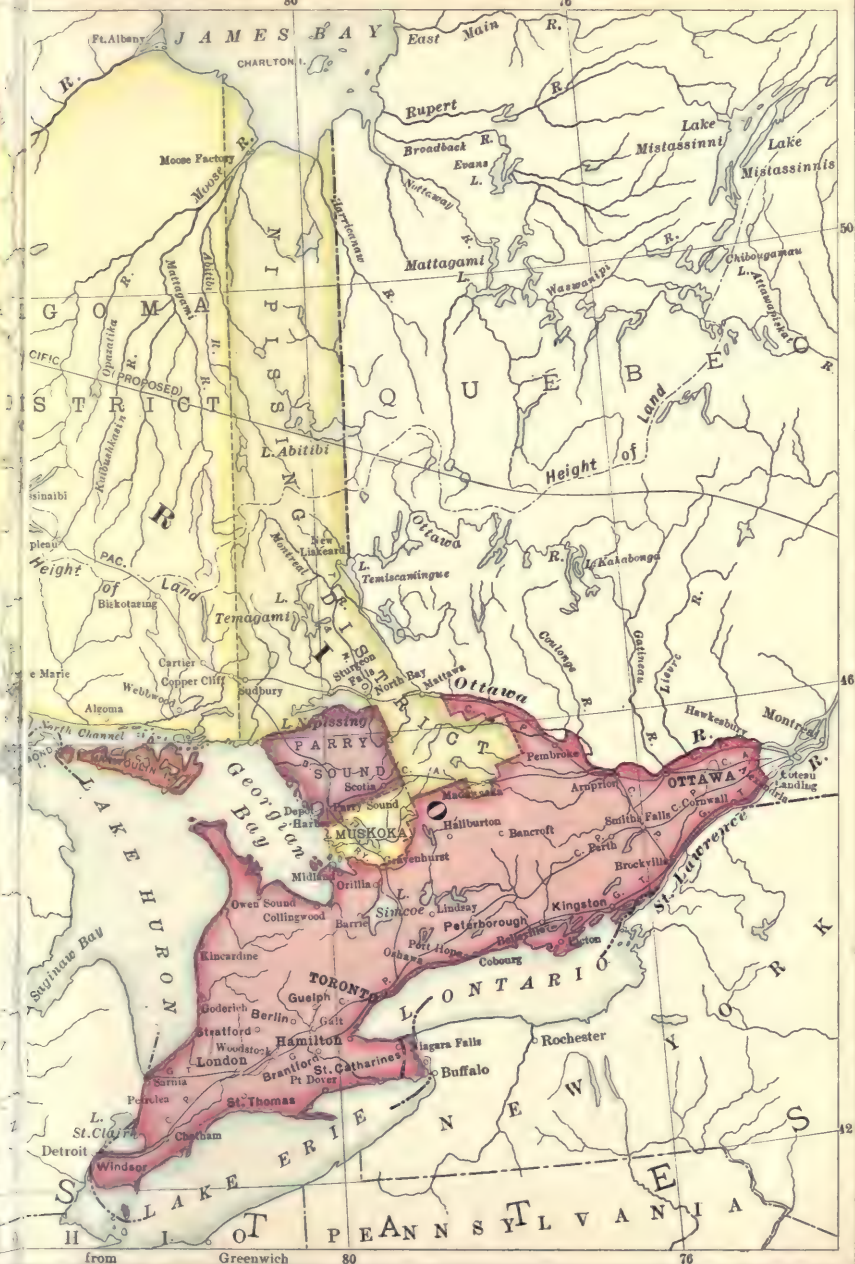
" " 10,000 " " " " Kingston

Capitals are shown thus ©

Chicago

I L L.

I N D. C.



14



FIG. 95—Fort George, 1812, at the mouth of the Niagara River
(From an old print)

To which country, Canada or the United States, do the following islands belong: Royale, Michipicoten, St. Joseph, Drummond, Cockburn, Pelee, Grand, Wolfe? Determine, by measuring on the map, what are the greatest distances across Ontario from north to south, and from north-west to south-east.

Relief. Find on the small map (Fig. 96), the four highest and the two lowest regions in Ontario. The highlands are more or less rocky and barren, with here and there fertile valleys and many small lakes among the hills. There is excellent farming land in nearly all the "western peninsula" (or arrowhead-shaped part between Lakes Huron and Ontario), and along the shores of Lake Ontario, and the St. Lawrence and Ottawa rivers.

That portion of the Province north of Lakes Huron and Superior is known as "New Ontario" (Fig. 97) It is nearly twice as large as the older and better settled parts in the south, and, as yet, is only partially settled. The

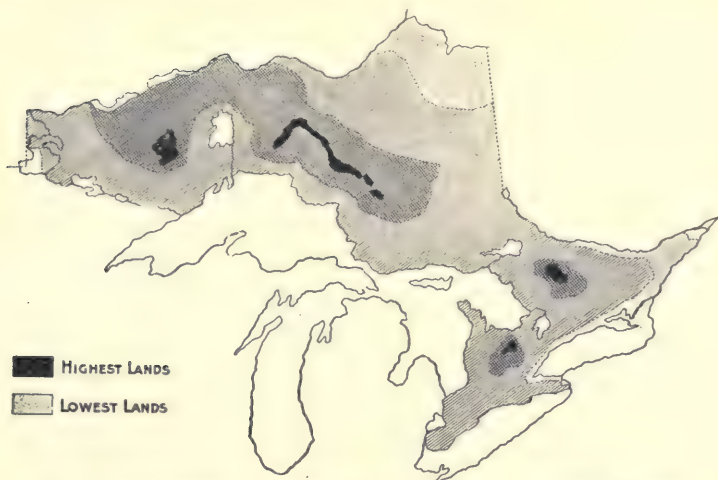


FIG. 96—Map showing elevation of different parts of the Province of Ontario

development of its mineral resources have caused rapid increase of population and growth of several towns in recent years.



FIG. 97—A General Store on Blanch River, New Ontario

Climate. Northern Ontario and the Ottawa valley have cold winters, but the southern and south-western parts of the Province have milder and shorter winters, due partly to the modifying influence of the Great Lakes. The summer temperatures are nearly the same in all sections of the Province, the lakes keeping the more southerly parts as cool as the northern inland regions.

What is the general direction of the winds which blow over Ontario (Fig. 11)? They carry some moisture from the ocean, and also collect a little from the Great Lakes, and much of this falls as rain. The greatest rainfall is naturally in the western peninsula, where it averages about 27 inches per year; and the least is in the north-east, where the yearly average is about 23 inches. The moisture of the air falls in winter as snow, and the longer and colder the winter the greater is the amount of snowfall. The heaviest snowfall is therefore in the north-western part of the Province, where it reaches an average of nearly nine feet in a year, and the least is in the south-west, where the average is a little more than five feet in a year.



FIG. 98—Scene on Muckoka Lake, Ont.

Drainage. In what two great drainage slopes is Ontario situated? In which is the greater part of the Province?

The more important rivers of the St. Lawrence basin in Ontario, with the exception of the Ottawa, may be arranged in two groups, namely, those flowing from the highlands east of Georgian Bay, and those flowing from the highlands south of Georgian Bay. Name the largest rivers and lakes in each of these groups. Nearly all the

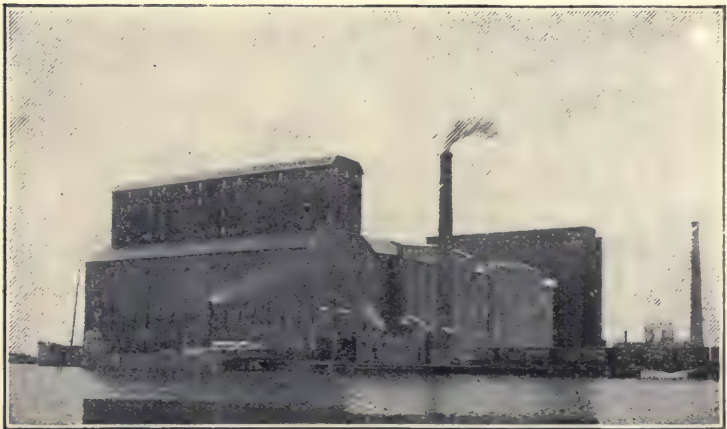


FIG. 99—Canadian Northern Railway Elevator, Port Arthur

rivers in the first-named group are valuable in the lumbering industry. Why? The lakes also are noted for their delightful scenery, and many of them are favorite summer resorts (Fig. 98). The rivers of the second group furnish water-power to many towns and villages on their banks. What large lake is drained into Lake Superior from the north?

Name the largest rivers and lakes in the Hudson Bay basin. How do the rivers of this basin compare in size with the Ottawa, as far as you can judge from the map?

Coast-Lines and Islands. Name the largest bays and islands in Lake Superior and Lake Huron. Which is the largest island? Nearly all these islands are rocky and barren; there are a few farming settlements in Manitoulin Island; the greater number of islands in Georgian Bay are famed for their picturesque scenery.

Name the Canadian islands at the mouth of the St. Clair River and in Lake Erie. Which one is farthest south?

What bay is at the western end of Lake Ontario, and what city is situated on it? What city further east is important for its harbor? What long, narrow bay is near the eastern end of Lake Ontario? A canal has been cut through the narrow isthmus at the western end of this bay. Name three large islands in the eastern end of Lake Ontario. Name the group of islands where the St. Lawrence River issues from Lake Ontario. For what are they noted?

Where does Ontario extend to salt water? Why is this coast of very little value to the Province?

People. Ontario has more than two-fifths of all the people in Canada. Its population in 1901 was 2,182,947, or an average of about ten persons to the square mile.

As in other provinces, the original inhabitants were Indians. Many of them yet remain in "New Ontario," and on *reserves* in the southern part of the Province.

When the United Empire Loyalists came to Canada in 1784 and succeeding years, many settled along the St. Lawrence River and Bay of Quinte, in the Niagara peninsula, and near Lake St. Clair. These were the earliest British people who at various times have come to Ontario.

During the years 1812-14 a severe war was waged against Canada by the United States. In many battles the Canadians bravely and successfully defended their country, among which were Queenston Heights (where the heroic Canadian



FIG. 100—House where General Brock died, with Brock's Monument in the distance, Queenston Heights

Major-General Brock was slain) and Lundy's Lane in the Niagara peninsula (Fig. 100).

People of British descent now make up the greater part of the population of the Province. There are settlements of French Canadians in the north-east and also in the south-west along the Detroit River.

There is an excellent system of education in Ontario, controlled by the Minister of Education, one of the members of the Provincial Cabinet. It includes Public and Separate Schools, High Schools and Collegiate Institutes, Model and Normal Schools, and the Provincial University in Toronto. There are many other institutions of learning throughout the province, some of them private, and others maintained by religious denominations.

Agriculture. The principal industry of the people of Ontario is agriculture, including stock-raising, dairying, and fruit growing, and in this the province occupies a foremost place amongst the countries of the world.

The crops raised include fall and spring wheat, barley, oats, rye, pease, buckwheat, beans, potatoes, beets (Fig. 101), and other root crops, hay, and corn. The chief farming lands are in the western peninsula, along the northern



FIG. 101—Beet Sugar Factory at Berlin

shore of Lake Ontario, and in the valleys of the Ottawa and St. Lawrence rivers.

The raising of cattle, horses, sheep, and swine is an important industry in all the agricultural parts of the province.

Fruit-growing is carried on in the greater portion of the farming lands, and in some localities nothing else is cultivated.

There are two districts in the province, however, that are specially noted for the excellence and extent of their fruit crops. These are the Niagara peninsula and the



FIG. 102—Peach Orchard in the Niagara District, Ont.

south-western corner of the western peninsula. The richest part of the Niagara fruit district is a narrow plain between "the mountain" and Lake Ontario, and extending from the city of Hamilton to the Niagara river. Both these localities produce not only large crops of apples and small fruits, but also enormous yields of peaches and grapes (Fig. 102).

Dairying, or the manufacture of butter and cheese, is conducted chiefly in creameries and cheese-factories.



FIG. 103—Agricultural College, Guelph, Ont., shewing hay field in the front of the picture, and farm buildings in background

Canadian cheese is highly prized in Great Britain, and the demand there for our butter is increasing.

All these branches of the farming industry are greatly assisted by agricultural societies and farmers' institutes in every municipality, and by the provincial live stock associations, fruit-growers' association, dairy associations, the Ontario Agricultural College at Guelph (Fig. 103), dairy schools in Guelph, Strathroy, and Kingston, the Dominion Experimental Farm at Ottawa, and fruit experiment stations in various parts of the province.

Mining. The mining region of Ontario is, generally speaking, that vast part of the province outside of the agricultural districts. The chief minerals of that region

are gold, iron, copper, nickel, silver, (Fig. 104), marble, and granite.

Gold is found in several localities. The richest and broadest areas are in the Rainy River district in the extreme north-west of the province. The town of Kenora owes its rapid growth partly to the gold-mining in-



FIG. 104—A Silver Mine, Cobalt, Ontario

dustry carried on near it. Other gold districts are on the north shore of Lake Superior, the north shore of Lake Huron, and the country north of Lake Nipissing. The Michipicoten district at the east end of Lake Superior is said to have some gold, and Hastings county has for many years had paying mines of this metal.

Iron is more widely distributed over this region than gold. What is said to be one of the largest deposits in America is a ridge in the Rainy River country about twenty miles long, 150 to 300 feet wide and 200 feet high. The largest mine in Canada is at Michipicoten, on Lake Superior. Blast furnaces have been established at Sault Ste. Marie, Collingwood, Midland, Hamilton, and Deseronto, which are supplied with ore from the Ontario mines. Find these places on the map.

Nickel is a very valuable metal discovered in 1886 near the town of Sudbury (north of Georgian Bay). The deposits found there are the only ones in the world, except those of

New Caledonia, an island in the South Pacific Ocean. Find out as many uses of nickel as you can.

Copper is found in the districts north of Lakes Superior and Huron.

But the minerals of the western peninsula of Ontario, though different from those of the so-called "mining region," are none the less valuable. They include petroleum, natural gas, gypsum, salt, sandstone, limestone, and brick-clay.

The value of Ontario's production of petroleum is about one million dollars a year. The wells are chiefly in the south-western part of the peninsula, near Petrolea, Chatham, and Bothwell (Fig. 105).

Natural gas is obtained in the extreme south-west (Essex county) and in the Niagara peninsula. Besides its use at the wells for heating and lighting purposes it is piped to the cities of Windsor and Detroit from one of the districts and to the city of Buffalo from the other.

Salt wells are operated along the eastern shores of Lakes Huron and St. Clair, the salt being obtained by evaporation of the brine that is pumped to the surface.



FIG. 105—Torpedoing an Oil Well near Petrolea, Ont.

Gypsum is found along the lower course of the Grand River, limestone in south-western and south-eastern Ontario, and sandstone near the western end of Lake Ontario.

The Ontario Government is encouraging the development of the various mines of the province, and maintains the School of Practical Science in Toronto and the School of Mining in Kingston.

Other Industries. Fishing is a valuable industry on the Great Lakes (Fig. 106). Local markets are supplied with such food fish as salmon trout, herring, whitefish, maskinonge, and bass. The small inland lakes and streams



FIG. 106—Fishing on Lake Huron—after the morning catch

also furnish an almost unlimited supply of game fish, and are favorite resorts of sportsmen.

Lumbering is conducted chiefly in the region east of Georgian Bay. The Petewawa, Bonnechere, Madawaska, and Trent rivers form the principal outlets for the timber products of the district.

Manufacturing is carried on in the cities and towns, especially those of the older settled parts. Name as many

articles in your home as you can that are made in large factories. The manufacture of machinery to be used by railway companies, farmers, and mechanics employs thousands of workmen, and flour mills, planing mills, and woollen mills are everywhere to be found.

The Provincial Government. The Government of Ontario is similar to that of the other provinces of the Dominion. It is carried on by a Legislative Assembly and a Lieutenant-Governor assisted by an Executive Council.

The Legislative Assembly, or Legislature, is composed of 98 members elected for four years by the people of the province. Who is the present Speaker of the Legislature?

The Lieutenant-Governor is appointed by the Governor-General of Canada in Council (which practically means by the members of the Dominion Cabinet). The term of office is usually from five to seven years. Who is the present Lieutenant-Governor?

The Executive Council or Cabinet is a committee of eight members, at whose head is the Premier. The Lieutenant-Governor appoints the Premier, and the Premier selects the Cabinet Ministers from the political party having the majority in the Assembly. Who is the present Premier? The business of governing the province is divided into "Departments," and at the head of each Department is a Minister.

Ontario sends 86 members to the House of Commons in Ottawa and 24 members to the Senate.

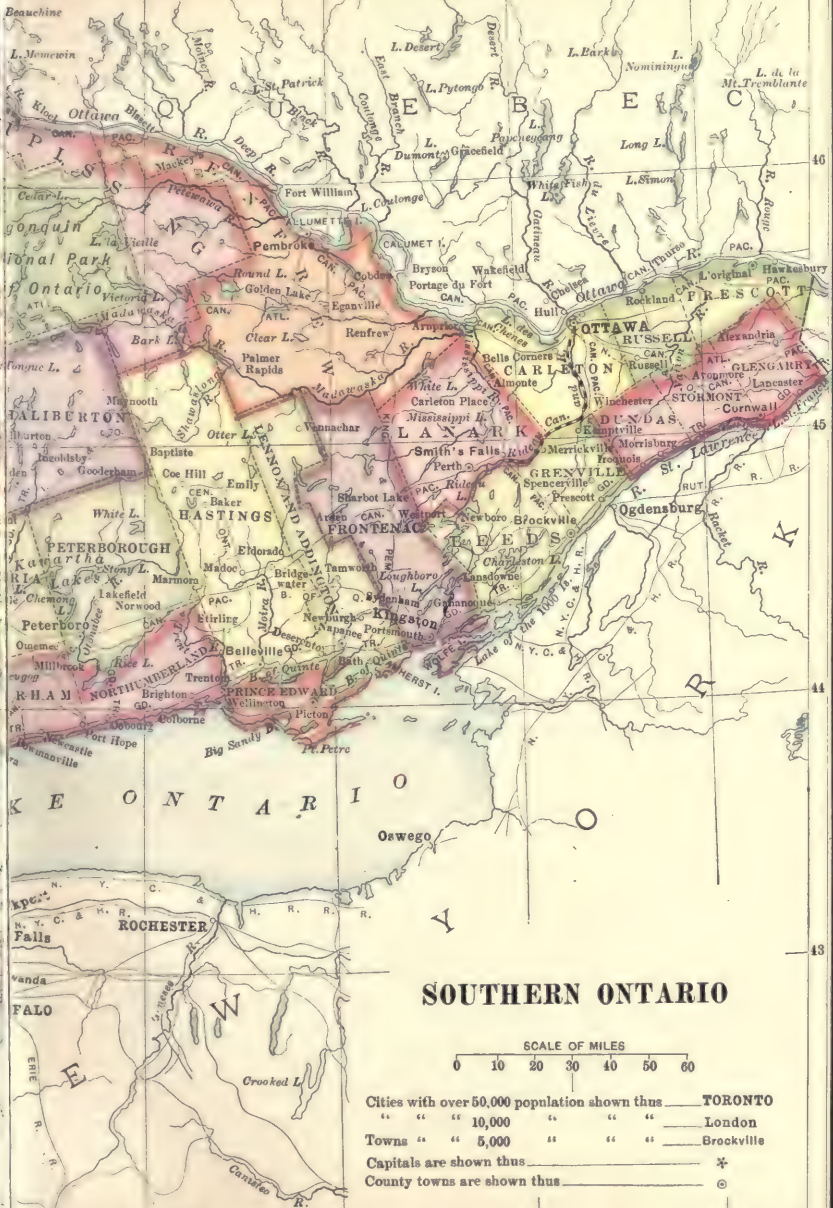
Municipalities. What is a municipality? What is the largest kind of municipality in our province? County Councillors are elected for two years by vote of the people. By what title is the presiding officer of the County Council known? Each county is also a district for the administration of justice, and has its court house and jail at the county town.

What are the subdivisions of a county? How are Township Councillors appointed? How long is their term of office? What is the presiding officer called?

A *Village* may be incorporated and allowed to manage its own local affairs by Council and Reeve when its population reaches 750. When the population reaches 2,000 the place may be incorporated as a *Town*, governed by Councillors and *Mayor*, and when the population reaches 15,000 it may become a *City*, governed by *Aldermen* and Mayor. The population standard, however, is not strictly observed. By special legislation a place may become a village, town, or city without the necessary number of people, and so we find incorporated villages with less than 500, towns with less than 1,200, and cities with less than 10,000 of a population.

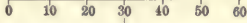
A *riding* or *constituency* is a district represented in the House of Commons or the Legislature by one member. It consists of the whole of, or





SOUTHERN ONTARIO

SCALE OF MILES



- Cities with over 50,000 population shown thus **TORONTO**
- “ “ “ 10,000 “ “ “ **London**
- Towns “ “ 5,000 “ “ “ **Brockville**
- Capitals are shown thus *****
- County towns are shown thus **⊙**

part of, each of the larger cities (Ottawa, Kingston, Toronto, Hamilton, and London), or of a group of townships.

The more thinly settled parts of the province are marked off into *judicial districts*, having regular courts for enforcement of law, but without county councils.

Counties and Districts. Ontario is divided into thirty-eight counties and seven judicial districts.

The districts are Muskoka, Parry Sound, Manitoulin Island, Nipissing, Algoma, Thunder Bay, and Rainy River.

Haliburton has a County Council, but is attached to Victoria County for judicial purposes, so it is considered not a judicial district, but a *provisional county*.

There are four groups of *united counties*, and for each group there is one County Council and one County Court. The groups are as follows:—1. Northumberland and Durham; county town, Cobourg. 2. Leeds and Grenville; county town, Brockville. 3. Dundas, Stormont, and Glengarry; county town, Cornwall. 4. Prescott and Russell; county town, L'Orignal. The County of Lennox and Addington is not a union of two counties, but a single county with a double name.

The names of the counties and their county towns, may be studied from the map.

Cities and Towns. Study the map and find out which part of the Province, agricultural or mining; has the greater number of cities and towns. What reasons can you state for this?

Ontario has sixteen cities. Their names, in order of position, are: Ottawa, Kingston, Belleville, Peterborough, Toronto, Guelph, Stratford, Niagara Falls, St. Catharines, Hamilton, Brantford, Woodstock, London, St. Thomas, Chatham, Windsor. Use the Appendix, and name these cities in their order of size, and find out also the names of the ten largest towns of the Province.



FIG. 108—Map of Toronto and Vicinity

TORONTO (Fig 108), is the largest city in the province, the second largest in the Dominion, and the provincial capital. It was founded in 1794 by Lieutenant-Governor John Graves Simcoe, and called York. It has become the centre of trade for the province because of its excellent harbor, because so many rail-ways lead to it from different directions (Fig. 109), and because its

manufactures are so varied and so extensive. The city is handsomely and substantially built, and contains many fine public buildings, devoted to government, educational, religious, charitable, and commercial purposes. There are also many magnificent private residences, the parks and gardens throughout the city are large and attractive, and the Island, lying just outside the harbor, is a favorite resort for the citizens, and in some parts is well built up with summer residences.

OTTAWA, the capital of the Dominion, is situated on the high and rocky banks of the Ottawa river between the Chaudière Falls of the Ottawa at the west and the Rideau Falls, where the Rideau River enters the Ottawa, at the east (Fig. 110). It was founded in 1827 when the route of the Rideau Canal was decided upon, and named Bytown after Colonel By who managed the construction of the canal. Its name was changed to Ottawa



FIG. 109—Grand Trunk Freight Sheds, Toronto, Ont.

in 1854, and it was selected by Queen Victoria as the capital of Canada in 1858.

Ottawa is the centre of the great lumber trade of the Ottawa River and its tributaries. It has therefore many large saw-mills and lumber yards. The surrounding country, especially at the south, has good farming land.

The Parliament Buildings are by far the most prominent in the city. The first stone of these buildings was laid by King Edward (then Prince of Wales) in 1860, and they were completed in 1865, having cost nearly four millions of dollars. They consist of four large buildings—the main building (containing the chambers of the House of Commons and the Senate), the eastern and western departmental buildings, and the library. Other smaller buildings adjoining also are used for government purposes—the Patent Offices, the Supreme Court building, the Government Printing Bureau, and others. Rideau Hall, the residence of the Governor-General, is in New Edinburgh, a suburb east of the city.

Hamilton is a busy manufacturing city at the western end of Lake Ontario. As it is at the head of navigation of the lake and is entered by many lines of steam and electric railways, it is a distributing point for a large portion of south western Ontario. Its manufactures are varied and extensive, the most important being those of iron, cotton, and woollen goods (Fig. 111).

London has long been a centre of trade for the western peninsula of Ontario. It is by far the largest business place west of Hamilton, and is the market town for a wide and wealthy agricultural district.

Kingston, the oldest city in the province, was



FIG. 110—Map of Ottawa and Vicinity



FIG. 111—Hamilton, Ont., Market

in 1673 a fortified French post called Fort Frontenac (named in honor of the Governor who founded it). The old fort has given place to the more modern Fort Henry and some smaller buildings. At one time also (1840-44) Kingston was the Canadian capital. In the village of Portsmouth west of the city is the Provincial Penitentiary.

Many of the smaller cities and towns of Ontario owe their importance to their local markets, to their manufactures, or to the trade that passes through them. The cities of *Brantford*, *Guelph*, *Woodstock*, *Chatham*, *Belleville*, and *Peterboro*, and the town of *Brockville* have increased because of the prosperity of the agricultural districts around them. They all, also, have important manufactures, and so have the towns of *Galt*, *Berlin* and *Cornwall*. The cities of *Windsor*, *St. Thomas* and *Stratford* are railway centres and are surrounded by flourishing agricultural districts. *St. Catharines* owes its growth to being in the Niagara fruit region, and to its trade on the Welland Canal, and *Niagara Falls* to the development of the water-power of the Falls for use in many manufactures (Fig. 112). *Owen Sound* has become important because of its passenger and freight trade on the upper lakes. *Sault Ste. Marie* is a rapidly growing town with iron-smelting works, wood pulp manufactures, and a large lumbering trade through the Canadian "Soo" canal. *North Bay* is increasing in importance with the opening of the agricultural, mining, and lumbering regions of "New Ontario." *Fort William* and *Port*



FIG. 112—General View of Niagara Falls. The larger Canadian Horse-Shoe Fall is in the distance



FIG. 113—Outline map of the Province of Ontario

Arthur are outlets for the grain of Manitoba and the North-West, which is brought from these ports by boat to *Parry Sound*, *Midland*, *Collingwood*, *Meaford*, *Owen Sound*, and *Sarnia*. *Kenora* carries on a great lumber trade, and is also a mining centre. *Goderich*, *Seaforth*, and several other towns on or near Lake Huron have valuable salt wells, and *Petrolea*, in the south-west, is the chief oil-producing town in the province.

Draw a map of Ontario (Fig. 113), and mark on it the chief cities and towns, the principal rivers, and the main lines of railway.

Province of Manitoba. Find Manitoba on the map of Canada. Of what shape is it? How does it compare in size with the other provinces? Describe its situation with reference to the Dominion as a whole, and also with reference to the whole continent of North America.



FIG. 114—Old Fort Garry, Manitoba

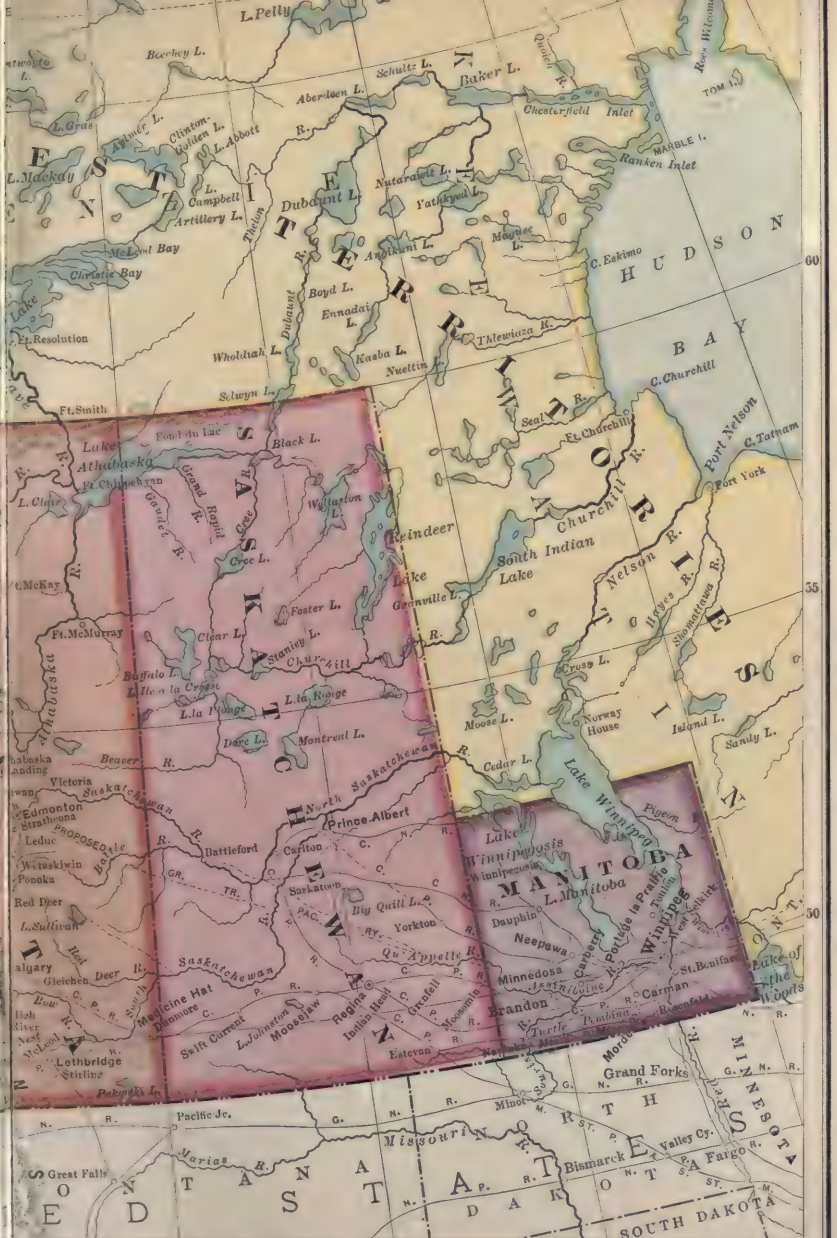


FIG. 115—The Stock Yards. Winnipeg

In the year 1812 the Earl of Selkirk, Governor of the Hudson's Bay Company, and a small number of Highland Scottish settlers, received from the Company a grant of 16,000 square miles of territory on the banks of the Red River, on which to establish a colony and trading post. The land occupied was at the junction of the Assiniboine and Red Rivers, and upon it was erected a fort called Fort Garry (Fig. 114). After a period of about fifteen years, during which the settlers suffered hardships and disappointments because of floods, insect pests, famine, and attacks of rival fur-traders and Indians, the colony began to grow, and in course of time became the prosperous *Red River Settlement*. In 1868 the Hudson's Bay Company's rights to the lands of the North-west were purchased by the Canadian Government, and two years afterwards Red River Settlement became part of the Province of Manitoba.

Manitoba is sometimes called the "Prairie Province," but only the south-western part of it consists of prairie land, and even in this there are some broad wooded uplands such as Pembina and Turtle Mountains. In the north and east it is more hilly and rocky, and covered with valuable forests, with numerous lakes of various sizes.





The winters in Manitoba are clear and cold, and the summers warm and bright. There is a large amount of rain and snow, though not as much of either as in the provinces east of it.

Name the three large lakes in the north. Name the one that touches the south-eastern corner. What two rivers empty into the southern end of Lake Winnipeg? What is the largest tributary of the Red River? Name a tributary of the Assiniboine in Manitoba.

The chief industry of the province is *agriculture*. The soil in the south and west is rich, and yields an abundance of wheat, oats, roots, and other farm products of highest excellence. Wheat is the principal source of wealth of the province. Elevators for storage of grain previous to export are in all the numerous towns, and a network of railways has been constructed, over which the grain is brought to Winnipeg, on its way to the eastern provinces and to foreign countries.



FIG. 117—City of Winnipeg, looking westward

Dairying and *stock-raising* are important industries (Fig. 115) in the agricultural districts. *Fishing* is carried on in the large lakes in the north, and the production of *caviare* from the roe of the sturgeon is now valued at a million dollars yearly. A little *lumbering*, to supply the needs of the province, is done in the forests of the north and east.

The Canadian Pacific and the Canadian Northern are the chief railway systems. Both of them have several branches and leased lines throughout the province. The Grand Trunk Pacific (now building) will run through Manitoba north of the existing lines, from east to west, and will open up a section of fertile farm lands. This will give Manitoba direct communication with the Seaboard at Quebec and in the Maritime Provinces, passing through a country hitherto unsettled and inaccessible.

Manitoba is improving rapidly like the country west of it and has the steady growth of an already established and prosperous province. Describe its government. Its educational facilities include a provincial University with five colleges, and a system of efficient common and high schools.

The city of WINNIPEG (Figs. 117 and 118) is the capital, and oldest city in Manitoba. It has grown since 1868 from a village of about 100 people to a city of over 75,000, and is now by far the greatest city in Western Canada. It owes its importance to being the point of distribution of supplies for the whole North-West, and the centre of the grain trade of Manitoba. It is entered by nearly a dozen railways (Fig. 119). It is situated near the centre of the continent, the distances to Vancouver, San Francisco, New Orleans, New York, and Quebec being nearly equal, and it must be regarded as one of the great commercial centres of the New World.



FIG. 120—Beavers at work

Hospital, and a great number of factories and business houses.

Brandon and *Portage la Prairie* are junction points on the main line of the Canadian Pacific Railway west of Winnipeg. They are busy

grain markets, and have a great many grain elevators.

Smaller towns that are centres of local trade are *West Selkirk*, *St. Boniface*, *Morden*, *Carman*, *Neepawa*, *Dauphin*, and *Carberry*. Find all these on the map.

The District of Keewatin, which lies north and east of Manitoba, on the shore of Hudson Bay, was until lately under the administration of the government of Manitoba, but is now joined to the Northwest Territories for administrative purposes, under the direct control of the Dominion government. In the north it is wintery and barren, and in the south hilly, with lakes and forests similar to those of northern Manitoba. Furs and timber are the chief products. The trade of the country is virtually in the hands of the Hudson's Bay Company, who have numerous trading-posts or "forts" as they are called, established at the most convenient points for barter with the Indians. Some settlers are gradually making their way into the southern part of the district. The principal trading post is *Fort York* near the mouth of the Nelson, which is visited once a year by a Hudson's Bay Company's vessel from England to bring supplies and take away the year's collection of furs. *Fort Churchill*, on an excellent



FIG. 121—A Sheep Farm, Medicine Hat, Alberta

harbor at the mouth of the Churchill, and *Norway House*, near Lake Winnipeg, are other trading posts.

Provinces of Alberta and Saskatchewan.

Locate these provinces and name the boundaries of each. They comprise that part of Canada formerly known as the districts of Alberta, Assiniboia, Saskatchewan, and Athabasca, but in 1905 were formed into separate provinces of the Dominion, with the same rights and privileges as the older provinces. How do they compare in size with each other and with the other provinces of the Dominion?

They form part of the North American prairie country, and are generally level except where crossed by a few ranges of low hills. In the north they are more hilly and better wooded than in the south. Where is the highest land in these provinces? Where is the lowest?

In the east the summers are warm with moderate rainfall, the prevailing winds being from the south and southwest, and the winters are very cold with heavy snowfall, the winds then coming from the north and northwest. In the west, winds from the Pacific, known as the *Chinook Winds*, make their way through the mountain passes, and, having parted with nearly all their moisture

on the Pacific slopes, pass over Alberta as warm, dry breezes. In Alberta, therefore, more especially near the Rocky Mountains, the weather is warmer in winter and drier in summer than in the more easterly country. Throughout the two provinces the healthfulness of the climate is unsurpassed.

In what river-basin is the greater part of these provinces? What part of Alberta is in the Mackenzie basin? What are the two main branches of the Saskatchewan River? What is the chief tributary of the north branch? What are the two largest tributaries of the south branch? How far apart are the sources of the north and south branches? How far apart do these branches diverge? What is the principal river in the south-east? Into what other river does it flow?

The two chief industries of these provinces are *agriculture* and *stock-raising*. In Saskatchewan and northern Alberta great quantities of grain are grown, and in southern Alberta ranching of horses, cattle, and sheep is the chief occupation (Figs. 121, 122, 123). What conditions of weather favor grain-raising in Saskatchewan? What conditions, both in winter and summer, favor ranching in Alberta? What are the chief exports from the ranches?

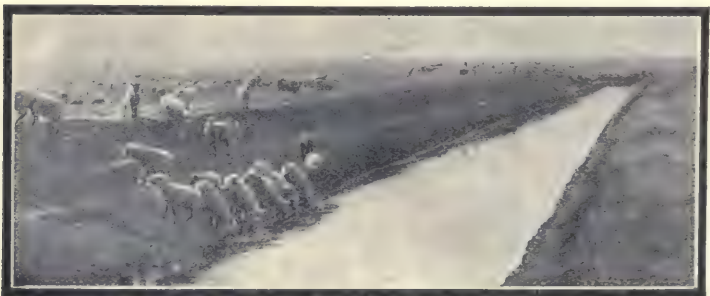


FIG. 122—Galt Irrigation Canal, Southern Alberta. The water is brought from the Rocky Mountains, a distance of sixty miles

Mining has recently become an important industry. Soft coal and lignite deposits underlie nearly the whole of Alberta and a large part of southern Saskatchewan, and hard coal occurs in the mountainous regions of western Alberta. "The coal mines already discovered are of sufficient extent to supply Canada with fuel for centuries." Gold, also, has been found in paying quantities in the



FIG. 123
Branding Cattle,
Alberta

Saskatchewan and some of the streams descending the slopes of the Rockies.

The entire North-West is fairly well

served with existing lines of railway, and the construction of the Grand Trunk Pacific across Saskatchewan and Alberta will open up a thousand miles of unsettled farm and ranch land. Along this new line there are now open to settlers hundreds, if not thousands, of desirable homesteads within easy reach of the proposed railway.

What railway runs through Southern Saskatchewan and Alberta? From what points on it do branch lines extend?





FIG. 124—Banff, Alberta

To what places do they go? The branch into southwestern British Columbia is the Crow's Nest Pass line, opening up valuable coal and gold mining areas.

The population of these provinces in 1901 was more than twice what it was in 1891, and the annual increase since then has been remarkable—nearly equal to that of the whole ten-previous years. The majority of the settlers are from eastern Canada, Great Britain, Germany, and the United States, though there are settlements of Doukhobors, Galicians, Scandinavians, and others from European countries.

The form of government is the same as that of the older provinces.

In the Rocky Mountains near the western boundary of Alberta the Canadian government has set apart a portion of country 26 miles long and 10 miles wide as a National Park. In various directions through its magnificent mountain scenery roads have been laid out and streams bridged, while the Bow River and the numerous small tributaries and lakes there connected with it have become alive with steam launches and pleasure seekers. Within the limits of the park is Banff (Fig. 124), a great health resort, where springs of hot sulphur water provide bathing places for invalids, and add to the attractions of the park.



FIG. 125—Map of Regina and Vicinity

REGINA is the capital of Saskatchewan and the headquarters of the Mounted Police (Fig. 125). It is a thriving and busy city, and has an important grain trade. *Moosejaw* and *Saskatoon* are two growing towns. What do you

think are their chief industries, judging from their situations and railway connections?

Prince Albert is a large town, surrounded by a flourishing farming district. *Battleford* has large cattle ranches in its vicinity.



FIG. 126—Map of Edmonton and Vicinity

In Alberta EDMONTON, the capital (Fig. 126), and *Strathcona* on opposite banks of the North Saskatchewan make up the largest centre of population in the Territories. Though rival towns they are rapidly growing because of



FIG. 127—Outline map, Rocky Mountains to Hudson Bay

agricultural and coal-mining operations near by, varied manufacturing industries in both places, and the likelihood that one or more railways from the east are soon to be constructed through them.

Fort Saskatchewan, eighteen miles down the river from Edmonton, is a growing town and is the military centre of the district. *Calgary*, the largest town in the North-West, is a railway centre, and derives much trade from the ranches, the mines, and the agricultural districts in the surrounding country. *Macleod* is the headquarters of the ranching industry, and *Lethbridge* of the coal-mining of southern Alberta. On what railway are both the latter towns? Around Lethbridge an extensive system of irrigation is being carried out, making the land available for the production of beetroot and other valuable crops (Fig. 127).

Province of British Columbia. The Province of British Columbia is everywhere more or less mountainous. How much of the eastern border do the Rocky Mountains make up? What range runs parallel with and close to the Pacific coast? Between these two great ranges, are several

smaller ones, known by local names, enclosing fertile plains and valleys, and many small lakes.

Trace the coast-line of the mainland. It has many *fiords*, or narrow inlets with high rocky shores, which are supposed to have been formed long ago by the wearing action of glaciers, or by the sinking of the valleys.

What large island is at the south-west? What waters separate it from the mainland? What group of islands is off the coast farther north? These islands may be considered parts of another mountain range which in some places is submerged beneath the sea.

What is the general direction of the winds over the southern part of the province? Are they warm or cold? Are the coast waters warm or cold? The climate along the coast is therefore moist. The heaviest rainfall in Canada is along the Pacific coast. Account for this heavy rainfall. What two large rivers of the Mackenzie basin are in the north-east? What large river in the south-east passes to the Pacific through the United States? What two large rivers are entirely within the province? What river crosses southern Alaska on its way to the Pacific?

The chief industry of the province is *mining* (Fig. 128). Gold has been found in abundance almost everywhere west of the main chain of the Rockies, especially in the Kootenay district in the south-east. Silver, copper, lead, and coal are also mined in the south-east, and many important mining towns have grown up there in recent years. Large quantities of iron and coal are found in Vancouver Island (Fig. 129), and in some of the smaller adjoining islands.

The *fishing* industry stands next in importance. It is conducted on the rivers and inlets of the Pacific. What is the chief fish taken? How is it generally prepared for



FIG. 128—China Creek Hydraulic Mine, Cariboo Mining Division, B.C.

the market in this province? The yield of salmon is nearly 95 per cent. of the total of the British Columbia fisheries (Fig. 130). Other fish taken are halibut, herring, and cod. Oysters are obtained off the coast. Where are seals hunted?

Lumbering is third in order of importance, and is steadily growing as an industry. What are the chief varieties of wood obtained? What city is the centre of the trade?

Agriculture is successful in the warm southern valleys (Fig. 131). Not only are large crops of wheat and oats raised, but also apples, plums, pears, cherries, peaches, grapes, and smaller fruits are grown in considerable quantities. Other extensive regions of good farming land only await facilities for transportation to become valuable and productive.



FIG. 129—Smelting and Refining Works at Crofton, Vancouver Island, B.C.

The Canadian Pacific Railway is the chief internal highway of the province in addition to the steamers on the rivers and lakes. What is its western terminus? It has several short railway and steamboat branch lines in the Kootenay district, and it also has two ocean steamship lines from Vancouver, one to Japan and China, and the other to Australia. A telegraph cable-line has been completed between Vancouver Island and Australia, by way of Fanning Island and the Fiji Islands, thus forming a complete circle round the world on British territory.

The building of the Grand Trunk Pacific line across the northern part of British Columbia will open up a section

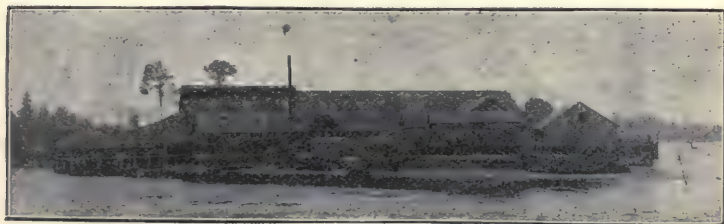


FIG. 130—Salmon Cannery near New Westminster, B.C.



FIG. 131—A Farm in British Columbia

hitherto inaccessible, a country known to be rich in mineral wealth, with wonderful possibilities for cattle ranching in the sheltered vales that lie between the coast range and the Rockies and with scenery

unsurpassed. What are the chief nationalities of the people?

The province has good schools wherever there is sufficient population to support them. There are over 350 schools, several of which are high schools.

British Columbia is one of the rapidly growing provinces of Canada. Its industries and foreign trade have made very great advancement recently (Fig. 132), and its popula-

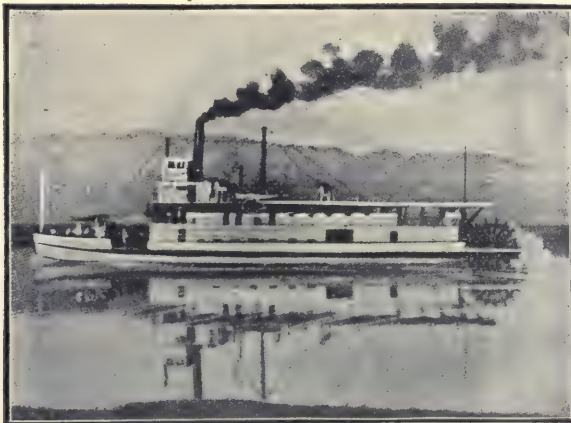


FIG. 132—A River Steamer carrying freight, Columbia River

tion has nearly doubled in ten years. The large cities are handsomely built and are busy trade and manufacturing centres, and many large and flourishing towns are springing up in the agricultural and mining districts.

The largest city in the province is **VANCOUVER** (Fig. 133). It owes its importance to being the western terminus of



FIG. 133—Map of Vancouver and Vicinity

the Canadian Pacific Railway, and to its shipping connections with Australia, Japan, the Yukon gold fields, and San Francisco, U.S. Burrard Inlet, on which it is situated, is a safe natural harbor. The city has iron-works, saw-mills, and many other large industries.

VICTORIA, the capital (Fig. 134), on Vancouver Island, is the oldest city in the province. It is a great commercial city, being a port of call for all the vessels which enter and leave Vancouver. Its Parliament buildings, erected at a cost of nearly one million dollars, are among its most im-



FIG. 134—Map of Victoria and Vicinity

posing structures. It has one of the largest iron works on the Pacific coast.

New Westminster, on the Fraser River, sixteen miles from its mouth, was once the capital of British Columbia.

It is the market town for a wide agricultural district, and an important lumbering centre. It is also the centre of the salmon canning industry of the Fraser, along which river there are at least forty-five canneries.

Nanaimo is the centre of the coal-mining industry of Vancouver Island. *Esquimalt*, three miles west of Victoria, is the station for the Pacific squadron of the British navy. It has an arsenal and a dockyard, and its fortifications are the strongest on the continent.

In the Kootenay District *Rossland* and *Nelson* are im-



FIG. 135—Port Simpson, B.C.

portant because of the rich gold and silver mines in their vicinity, and *Fernie* because of the great quantities of coke made there from the soft coal near by, to be used in the smelting operations throughout the mining regions.

Port Simpson (Fig. 135) is a Hudson's Bay Company post and Indian settlement on the coast near the mouth of the Skeena. It has an excellent harbor, and will be the western terminus of the Grand Trunk Pacific.

Yukon Territory. The Yukon Territory comprises that part of the basin of the Yukon River situated in Canada, between the Rocky Mountains and Alaska (a territory of the United States). The extreme north is covered with ice and snow for most of the year, but the southern part, mountainous and forest-clad, has a summer of several months (Fig. 136). Where in this territory is the main chain of the Rocky Mountains? What mountain



FIG. 136—At Grand Forks, 14 miles from Dawson, Yukon Territory



FIG. 137.—Gold Miners at work in the Klondike

range extends into the south-west corner? What two high peaks are in the latter range in this territory?

Extensive deposits of gold were found in 1897 along the tributaries of the Yukon near the boundary of Alaska—more particularly on the Klondike River—and immediately people flocked there by thou-

sands. The mines of the Klondike are among the most productive of the world. A thriving settlement has grown up, which depends primarily upon the gold-mining operations (Fig. 137).

The total population of the territory in 1901 was 27,219.

Describe the government of the Territory of Yukon. The territory is represented in the House of Commons at Ottawa by one member.

Dawson City (Fig. 138), at the junction of the Klondike and Yukon Rivers, is the capital, and the centre of the mining industry of the territory. It is a busy city, well built, with schools, churches, and public buildings, and many modern advantages, such as daily newspapers and electric light. It has good communication by the Yukon and Lewes Rivers up to *White Horse*, ninety miles from the British

Columbia boundary. From there the British Yukon Railway has been built through the mountain passes to Skagway on the coast. A telegraph line also connects Dawson with Ashcroft on the C.P.R. in southern British Columbia.



FIG. 138—Dawson and Vicinity



FIG. 139—An Outline Map of British Columbia and Yukon.

OTHER BRITISH COLONIES IN NORTH AMERICA

Newfoundland and Labrador. Give the position and boundaries of Newfoundland. Compare it in size with some of the provinces of Canada. Describe its general shape. What strait separates it from the mainland? From Cape Breton Island? Name the peninsula at the south-eastern corner. What cape is at the extreme south-east?

The surface is generally hilly, with numerous lakes and rivers. The highest mountains are in the west, and the general slope is toward the east. Name two rivers and one lake in the island.

In the southern part of the island the climate is milder than on the northern and western coasts and adjoining mainland. Can you explain why? The Arctic ice (Fig. 140), which in spring drifts southwards along the northern coast, chills the atmosphere, and, where the cold air meets the warm moist air over the Gulf Stream in the south-east, fogs are quite common.

The population of Newfoundland, including the Labrador Coast, in 1901 was 220,249, nearly all of British descent,

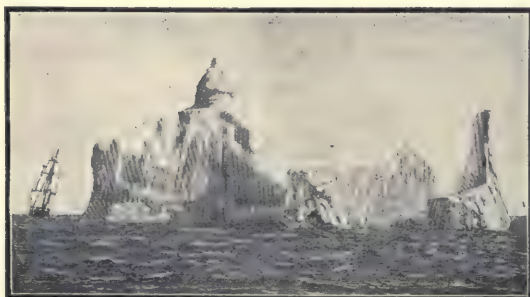


FIG. 140—Iceberg

the others being Indians and Eskimos. Avalon peninsula is the only well-settled part, and has the largest towns. The most important industry is



FIG. 141—Cod fishing on Newfoundland Banks

fishing. The cod fishery gives employment to half the population on the "banks" or shoals about one hundred miles south-east of the island (Fig. 141). Herring and lobsters also are taken. Seals are captured on the ice along the northern coast (Fig. 142), and seal, whale, and cod-oil form valuable exports. Other industries are lumbering, and mining of iron, coal, and copper. Agriculture is unimportant.

The chief trade of the island is with Canada, Great Britain and the United States.



FIG. 142—Seals

Dried codfish are shipped to the countries of southern Europe, to the West Indies, and South America. There are about 650 miles of railway now in operation, connecting with Cape Breton by steamer from Port aux Basques. Three cables connect the island with Europe, and two with the mainland of North America. St. John's is a port of call for several of the Atlantic steamship lines.

Newfoundland is a self-governing colony of Great Britain. The Governor, who is appointed by the British



FIG. 143—St. John's Harbor, Newfoundland

Crown, is assisted by an Executive Council responsible to the Parliament.

ST. JOHN'S, the capital, is the only city. It has an excellent harbor (Fig. 143), is the centre of nearly all the trade of the island, and is extensively engaged in fisheries. *Harbor Grace*, next in size to St. John's, has a good harbor and important fisheries. *Carbonear*, *Twillingate*, and *Bonavista* are the other large towns. *Heart's Content* is the landing place of the European cables.

The Labrador coast, from Blanc Sablon in the Strait of Belle Isle to Cape Chidley, for a few miles inland, is under the government of Newfoundland. Fishermen, to the

number of 20,000, flock there every summer and carry on the fishing industry. There are several villages of Eskimos, Moravian settlements, along the coast, each with a population varying from 200 to 400.

The Bermudas. These form a group of numerous small islands, about 600 miles east of Cape Hatteras, with an area of about twenty square miles, and a population of nearly 18,000, of whom two-thirds are Negroes. The climate is warm and healthful the year round, which renders the islands a favorite resort for invalids. The chief productions are early potatoes, onions, tomatoes, arrowroot, and bananas, which are raised for the American market. Many tropical fruits and lilies are grown there. The capital is *Hamilton*, an attractive little town on Long Island.

The Bermudas are important as being the winter station of the North Atlantic squadron of the British navy. On Ireland Island there is a strongly fortified royal dockyard, where the British warships refit.

The British West Indies. The West Indies (Fig. 167) extend from two peninsulas of North America to the mouth of a large river in South America. Name these.

They are generally mountainous and in some cases volcanic. In what heat belt are nearly all the islands? The climate is summer-like and hot the whole year, although the cool ocean breezes temper to some extent the extreme heat. The products are tropical. One of the principal plants is sugar-cane, from which are made sugar, molasses, and rum. Bananas, oranges, pineapples, coconuts, arrowroot, cacao, spices, dyes, coffee, and tobacco are common over the whole group, and are important exports (Fig. 144). The imports include necessaries not produced in a tropical country, such as machinery, coal,



FIG. 144—A river harbor in one of the West Indian Islands. Food products are brought in these small ships from the surrounding islands and thence carried to northern markets.

flour, and cotton goods. The principal trade is with Britain, Canada, and the United States.

The West Indies are divided into the Bahamas, the Greater Antilles (Cuba, Haiti, Jamaica, and Porto Rico), and the Lesser Antilles. Cuba is an independent republic; the island of Haiti is made up of two small republics named Haiti and Santo Domingo; all the other islands belong to European countries or to the United States.

The British West Indies are arranged under six administrations:— (i) The Bahamas, (ii) Jamaica, (iii) The Leeward Islands, (iv) The Windward Islands, (v) Barbados, (vi) Trinidad.

THE BAHAMAS form a group of over three thousand islands and rocks, many of which are of coral formation.* One of them is Watlings Island, believed to be the first land seen by Columbus in 1492. Sponges are gathered among the islands and exported. The capital is *Nassau*, a city of 12,000 people and a favorite winter health resort.

JAMAICA is the largest of the British West India Islands. Of its population of 770,000 more than ninety-five per cent.

*Coral islands have been built up in the ocean throughout the hot and warm belts by a small animal called the polyp, or more commonly but incorrectly the coral insect. Polyps live in colonies of millions in warm waters, and as they die they leave their stony shells upon which new ones build. In time, the shells form tree-like masses, and these become broken up by the force of the waves into heaps of coral rock which increase until they reach the surface of the water, and become covered with soil and plant life. A coral island is sometimes called a *reef*, and when it is more or less ring-shaped, enclosing a *lagoon* of water, it is called an *atoll*.

are Negroes, many of whom are highly educated, and hold responsible positions, while many also cultivate farms. The most important industry is fruit growing (chiefly bananas, which are now so common in Canada), and also sugar-cane (Fig. 145), cocoanuts (Fig. 146), coffee, and spices. The capital is *Kingston*, situated on a very fine natural harbor.



FIG. 145—Cutting and gathering Sugar-cane on a Jamaica Plantation

The LEEWARD ISLANDS extend from Porto Rico to the French island of Martinique. The capital is *St. John* on the island of Antigua.

The WINDWARD ISLANDS are south of the Leewards. *St. George*, on the island of Grenada, is the capital.

BARBADOS lies east of the Windward Islands. It is one great sugar plantation from shore to shore, and has a population of nearly 1,200 to the square mile, the most densely peopled country in the world. The capital is *Bridge-town*.



FIG. 146
Cocoanut Tree
and
Cocoanuts

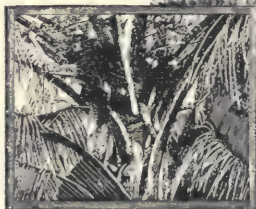




FIG. 147—Pitch Lake, Trinidad

TRINIDAD is the second largest of the British islands. In the south-west is a lake of pitch (Fig. 147), of 99 acres in extent and of unknown depth, solid at the margin, but liquid and slowly

boiling near the centre. This pitch is prepared into material for street paving (asphalt). *Port-of-Spain*, in the north-west, is the capital. The island of Tobago is under the administration of the Governor of Trinidad.

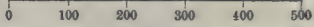
In Central America. BRITISH HONDURAS.—Locate this colony. Its surface on the coast is swampy, and its climate there hot and unhealthy. It exports mahogany, rosewood, logwood, and tropical fruits. What is its capital?





UNITED STATES

SCALE OF MILES



Cities with over 1,000,000 population shown thus — New York

“ “ “ 150,000 “ “ “ — St. Louis

Capitals shown thus ○

THE UNITED STATES OF AMERICA

Natural Features. State the boundaries of the United States, and describe carefully the line between that country and Canada.

The total area of the United States and its possessions is about 3,700,000 square miles; or, about the same as the Dominion of Canada without Franklin District.

What broad plateau is in the west? What range of lower mountains is in the east? What great river basin is in the centre? What slope is east of the Appalachians? Under what different names are the Appalachians known?

In what heat belts is the United States? Describe summer and winter in both the north and south. Compare also the climates of the Pacific and the Atlantic coasts. Where are the regions of greatest and least rainfall?

Name the two largest rivers of the Pacific slope? What rainfall gives rise to each? The Colorado is one of the most wonderful rivers of the world. It has worn its way down through the plateau to form in several places deep gorges, called *canyons*. The Grand Canyon is 200 miles long, with sides in many places perpendicular and 4,000 to 7,000 feet high (Fig. 25). The walls of the canyon are so steep that it is impossible for a person to climb them, except in a few places, and they are not worn down because they receive so little rain.

What is the principal lake in the Rocky Mountain plateau? Why are its waters salt?

Name the chief tributaries of the Mississippi—three from the west, and one from the east? What are the largest tributaries of the Missouri, Arkansas, and Ohio? In its upper course the Mississippi flows through a rocky and forest-clad country, and is very crooked and full of



FIG. 149—Boats on the lower Mississippi River

rapids and falls. Find on the map the city of Minneapolis. At that point are the Falls of St. Anthony, which give power to many flour mills. From there to its mouth the river is navigable (Fig. 149). In its lower course the surface of the river at different points is higher than the bordering country, and the water must be kept in its channel by great embankments called *levees*. What other city is near Minneapolis? What one is near the mouth of the Missouri? What one is near (about 100 miles from) the mouth of the river?

What large river separates the United States from Mexico?

The rivers of the Atlantic slope are small, but are of great importance for trade and for water power. Name one in the states of Massachusetts and Connecticut, one in

eastern New York, one flowing into Delaware Bay, and three flowing into Chesapeake Bay. Name the large cities at the mouth of the Hudson, near the mouth of the Delaware, on Chesapeake Bay, and on the Potomac.

What three great river basins of North America meet in Minnesota? Which of these basins contains Lake Michigan, and which one the Red River?

Compare the eastern and western coast-lines with each other in length and evenness. Name and locate the principal gulfs, bays, straits, capes, and islands along both coasts.

Productions and Industries. PRODUCTS OF THE SOIL.—The United States from the Atlantic coast, as far west as the 100th meridian, may be divided into two nearly equal parts by a line running east and west through the



FIG. 150—A Southern Cotton Plantation

northern boundary of Tennessee. The northern one of these parts is, speaking generally, the great *wheat* region. In it vast crops of wheat, corn, oats, hay, and potatoes—five-sixths of the total yield of these articles in the country—are grown. In the Southern States enormous quantities of *cotton* are raised over the whole section (Fig. 150), *rice* in the swampy lands near the ocean and gulf



FIG. 151—Tobacco Field, Virginia

coasts, and *sugar-cane* along the lower Mississippi. Over nearly the whole of both sections Indian corn is one of the most important crops, and in Virginia, Kentucky, Tennessee, North Carolina, and other states, tobacco is extensively cultivated (Fig. 151). The ordinary grains grow well also on the Pacific coast.

Three regions are noted for fruit. The States of New York, New Jersey, and Delaware are noted for their fruit and market produce, which supply the great cities of New

York, Philadelphia, Baltimore, and Washington; Florida produces abundant crops of oranges and other tropical fruits, as well as early vegetables; California yields oranges, grapes, lemons, pears, plums, and apricots.

The forest lands are in the north-east, the region near Lakes Huron and Superior, on the Appalachians, and on the Pacific coast. The chief lumbering operations in the east are carried on in Maine and in the parts of Michigan, Wisconsin, and Minnesota that border on the Great Lakes; and in the west in Oregon and Washington.

ANIMAL PRODUCTS.—One of the principal industries on the Great Plains is ranching. The cattle from there are generally sent to Chicago, St. Louis, Kansas City, and other centres, where they are slaughtered and prepared for the home market, or for shipment to Great Britain by refrigerator cars and steamships. In the great wheat region also millions of cattle are raised for their beef or their dairy produce. The dairying district extends from Ohio to Massachusetts.

Hogs are raised all over the corn region. Chicago, Cincinnati, Kansas City, and many other places, have large pork-packing establishments, and ship large quantities of hams, bacon, and lard to all parts of the Union and to distant countries.

Sheep are raised in nearly all the wheat-growing states, and in some places in the west are herded on ranches. What are the chief products obtained from them?

The fisheries of the United States are conducted on all the northern coast waters, on the great lakes, and along the shores of Alaska. On the Atlantic coast in the north, from Gloucester, Mass., and other ports, the deep-sea fisheries are carried on, chiefly on the Banks of Newfoundland, for cod and halibut, and further south oysters are gathered—particularly in Chesapeake Bay—a most import-

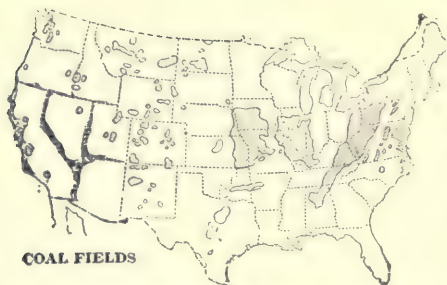


FIG. 152—Diagram of Coal Fields

tion of the principal coal fields. The most easterly of the three large coal fields is the richest, and the central one comes next. It is from this region that we receive all our hard, or anthracite, coal. The *petroleum* wells of Pennsylvania and West Virginia are the most productive in the world. The most important *iron* mines are those along the south shores of Lake Superior, and in northern Alabama; nearly all the *copper* comes from the Lake Superior region and from western Montana (Fig. 153). *Gold* and *silver* are found in the Rocky and the Sierra Nevada Mountains, and most of the states in that part of the country owe their origin and rapid growth to the discovery and development of their rich mines of these metals. Other minerals and rocks found in many localities are *lead*, *zinc*, *salt*, *granite*, *limestone*, *sand*, *stone*, and *slate*.

MANUFACTURES.—The manufactures of the United States are carried on chiefly in two sections of the country. One is the region east of the Appalachian Mountains, from the city of Washington north-eastwards. Find it on the map, and name the states in it. The other may be said to be bounded on the east by the Appalachians, on the south by the Ohio River, on the west by the Mississippi, and on the north by the Great Lakes. Only the southern

ant branch of the fisheries. The seal fishery is carried on along the shores and on the islands of Alaska.

MINERALS.—*Coal* is the most abundant mineral of the country. The small map (Fig. 152) shows the loca-

parts of Wisconsin and Michigan belong to this area. What states are included in it? Which quarter of the United States do these two districts make up?

The district on the Atlantic coast is noted for its manufactures because of the excellent water power afforded by the many streams, and because the soil, especially in the New England States (from Connecticut northwards), is not very good for farming. The principal products of the manufactures are cotton and woollen cloth, shoes and other leather goods, machinery, and lumber. Boston is the centre of manufactures in the north-east, and New York, Philadelphia, and Baltimore in the south.

On the Pacific Coast, chiefly in California, much attention is now given to manufacturing, owing principally to the great expense of transporting heavy materials to such a distance from the east.

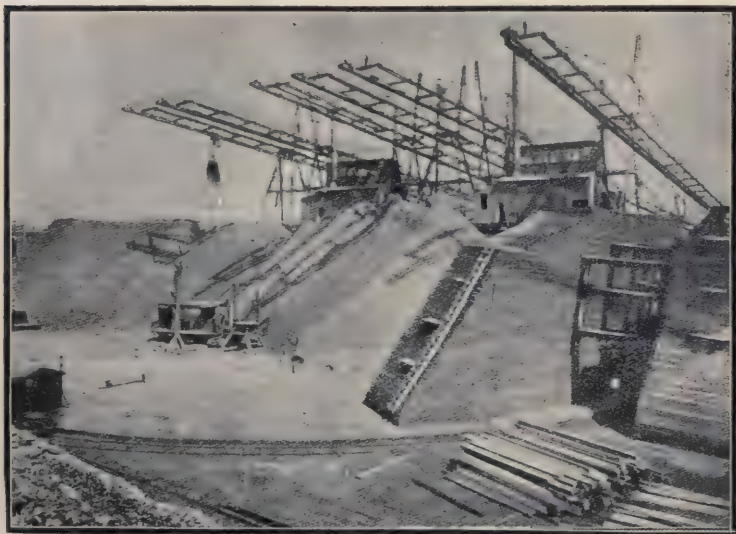


FIG. 153—Unloading ore from Lake Steamers. This ore is brought from the mines and transferred from the boat to the dock by huge steel cranes

The manufactures of the north central area are due to the excellent soil which supports the agricultural and dairying industries, and to the abundance of coal near by which is used in supplying steam power. The products of the manufactures include flour and cornmeal, packed beef and pork, iron and steel goods, agricultural implements, woollenware, and machinery. The chief centres are St. Louis and Minneapolis on the Mississippi, Chicago, Milwaukee, Detroit, Cleveland, Buffalo, and Rochester on the Great Lakes, and Cincinnati and Pittsburg in the interior.

In the South manufactures are largely increasing, more especially in northern Alabama and Georgia, where iron and coal mines have been developed.

Nine-tenths of the total manufacturing business is carried on in the first two districts above mentioned. The towns on the Pacific coast, however, are making great progress in their manufacturing industries.

COMMERCE.—In foreign trade the United States is exceeded by only two nations—Great Britain and Germany. The exports consist of raw cotton, breadstuffs, cattle, beef, bacon and hams, dairy produce, raw and manufactured iron and steel, and tobacco. From what parts of the country is each of these obtained? The imports include coffee, sugar, woollen and silk goods, and india-rubber. The foreign trade is carried on chiefly with Great Britain, Germany, and France.

The inland trade is conducted over the network of railways (about 200,000 miles in all), the Great Lakes, the Erie Canal (joining Lake Erie with the Hudson River), and the Mississippi with its tributaries.

The chief commercial cities of the United States are:

- i. *On the Atlantic Coast*—Boston, New York, Philadelphia, Baltimore.
- ii. *On Lake Michigan*—Chicago.

iii. *On the Mississippi*—St. Louis, New Orleans.

iv. *On the Pacific Coast*—San Francisco.

Of what form of commerce do you think each one of these cities is a centre?

People and Government. The population of the United States (not including Alaska, Hawaii, or the foreign possessions) was in 1900 a little more than 76 millions. The great majority of the people are of European descent, but there are many Negroes in the south-east, Indians in the Indian Territory and the west, and Chinese on the Pacific coast.

The United States is a republic, governed by a President, a Vice-President, and Congress, (Senate and House of Representatives), all of which are elective. What and where is the capital? Each state also has its own local government. Arizona, New Mexico, and Oklahoma have not full state privileges, and are called Territories. Indian Territory is an Indian reserve under the supervision of the central government.

The states and territories may be classified according to their industries as follows: (i) The New England Section, or north-eastern manufacturing district; (ii) The Northern Section, or grain-raising and northern manufacturing district; (iii) The Southern Section, or cotton-raising district; (iv) The Plateau Section, or mining district; (v) The Pacific Section, or western agricultural district. Name, with the aid of the small map (Fig. 154), the states and territories of each section.

The New England Section. Name the New England States and their capitals. Which one has two capitals?

The Legislature meets in Newport in the spring and in Providence in the autumn.

What have you already learned is the chief industry of these states? It is carried on in the three southern states, and southern New Hampshire and Vermont. What conditions encourage manufacturing? What are the chief manufactures? Cotton and woollen goods take the lead. In northern New Hampshire and Vermont the people pasture sheep and cattle, and prepare wool and dairy products. In what way is that district suitable for those industries? In Maine there is much lumbering and fishing.



FIG. 154—Industrial Sections of the United States

BOSTON, the largest city in the section, and a leading commercial centre of the United States, has a fine harbor. All the manufactures of the New England states are represented there, and it has a great foreign and inland trade. At *Cambridge*, a suburb of Boston, is Harvard University, the oldest and one of the largest in the United States. *Providence*, *Worcester*, *Lynn*, *Fall River*, and *Lowell* have important manufactures of cottons, woollens, and boots and shoes. *Portland* is the eastern terminus of the Grand Trunk Railway, and a great deal of Canadian

trade passes through it. The silverware of *Meriden*, and the watches of *Waterbury* and *Waltham* are noted over the whole continent. *Gloucester* is the centre of the fishing industry.

The Northern Section. Name the states of this group, and the capital of each. Nearly three-fourths of the population of the United States are in this and the New England sections. State some reasons why. New York state is the most important in the whole Union in population, manufactures, commerce, and wealth.



FIG. 156—Flatiron Building at the junction of Broadway, Fifth Avenue and Twenty-Third Street, the heart of New York. This building is twenty-one stories high



FIG. 157—The Manhattan Elevated Railway (60 feet high), New York

What are the chief agricultural products of this section? What crops in particular are grown in the states bordering on the Atlantic? What are the chief animal products? What fisheries are conducted on Chesapeake Bay? What are the principal minerals and where is each found? Describe

the manufactures of these states.

The section has many large cities and towns. Three have a population of more than one million each, namely, New York, Chicago, and Philadelphia.

GREATER NEW YORK is the largest city in the United States and the second largest in the world. In



FIG. 158—Brooklyn Bridge, New York

foreign commerce it is surpassed by only three ports in Great Britain, and it is the chief commercial and manufacturing centre of the United States (Fig. 157). Books and other printed matter, clothing, machinery, and flour are made, sugar from the West Indies is refined, and kerosene is prepared from petroleum piped into the city from the Pennsylvania oil district. Brooklyn, with which it is connected by bridge across the East River (Fig. 158), is its largest section, Central Park its most charming breathing place, Broadway its principal business street, Wall Street its financial quarter, and Fifth Avenue its most magnificent residential street.

CHICAGO is the centre of the wheat-growing district, and has one of the greatest grain and flour markets in the world. It is also the central market for cattle and hogs, and in its stockyards (Fig. 159), which cover more than a square mile, hundreds of thousands of these animals are slaughtered every day and the meat shipped to all parts of the country and to Europe. Pork-packing, preparation of canned meats, and tanning are important industries connected with the stockyards. Much lumber is brought from Michigan and Wisconsin to this port; iron



FIG. 159—The Great Stock Yards, Chicago, Ill.



FIG. 160—The United States Capitol, Washington

from the north, and coal from the south give rise to valuable manufactures. Chicago, owing to its position, has become one of the greatest railway centres in the world, and has a large trade on the Great Lakes. Why should its position cause it to become such a great railway centre?

PHILADELPHIA is adjacent to the coal and iron regions in Pennsylvania, and has therefore manufactures of iron and steel, such as those of locomotives and steel steamships. But the most important industry of the city is the carpet manufacture, employing more than 30,000 people. The manufacture of other woollen goods and clothing and the refining of sugar are also carried on. Coal, iron, and grain are important exports, and foreign trade is extensive.

In the south-east of the section BALTIMORE has important oyster fisheries, manufactures of flour, clothing, and tobacco, and important foreign shipping trade. It is the seat of Johns Hopkins University. WASHINGTON, on the Potomac, the capital of the Republic, in the District of Columbia, is famed for its beauty, partly due to the almost entire absence of manufacturing or commerce. Among its many attractive buildings are the Capitol (Fig. 160), in

which Congress meets, and the White House, the residence of the President.

On the Great Lakes one of the largest cities is *Buffalo*. This city ships much coal into Canada. It is an important shipping port at the terminus of the Erie Canal, and has also a great trade in coal, grain and flour, as have also *Rochester*, *Toledo*, *Cleveland*, *Detroit*, *Milwaukee*, and *Duluth* (Fig. 161). Duluth and other Lake Superior ports ship much iron ore to Chicago, Milwaukee, and Cleveland, where it is manufactured into pig iron and steel.

The cities of the Ohio valley are *Pittsburg*, the great iron manufacturing city; *Cincinnati* with grain and pork-packing trade; and *Louisville*, one of the largest tobacco markets in the United States.

In the western part of this section the largest city is **ST. LOUIS** on the Mississippi near the mouth of the

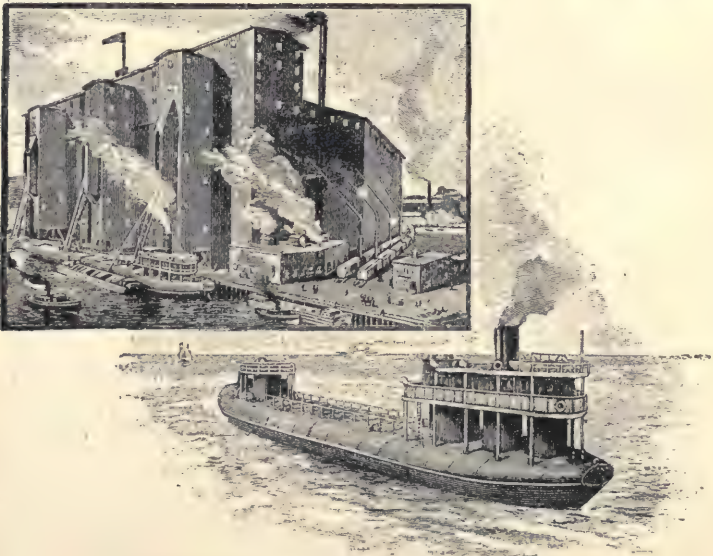


FIG. 161—Grain Elevator and Whaleback Steamer



FIG. 162—A Negro's House in the Turpentine Region, North Carolina

Missouri. It is a distributing centre for the western states, an important meat packing city, and has manufactures of liquors, tobacco, flour, and boots and shoes. *Minneapolis* and *St. Paul*, "twin cities," have large flour mills. *Omaha* is a rapidly rising city with important silver-smelting, and meat packing

works. *Kansas City* stands second to Chicago in slaughtering and meat packing. Why is meat packing such a great industry in many of these cities?

The Southern Section. Name the states and territories of this section, and the capital of each (Indian Territory has no capital. Why?) They contain less than one-quarter of the population of the Union, and two-fifths of the people are Negroes (Fig. 162).

What are the chief agricultural products?

Thousands of acres of land are planted with cotton. In the early summer yellow or pink flowers with red centres appear on the bushes. Six or eight weeks afterwards the pods burst open into large white woolly balls, the wool being the long fibres growing on the seeds. Then the harvest begins, and from August to December the wool is picked by hand. The fibre is afterwards separated from the seeds by a machine called a *gin*, and shipped to Great Britain, Canada, the New England States, and other places, where it is woven into thread or cloth. The seeds are crushed and a valuable oil is obtained which to some extent is taking the place of olive oil. The *cake*, or mass left after the oil is pressed from the seeds, is used as food for cattle.

There is much ranching of cattle and sheep on the plains of Texas, but manufactures are limited.

NEW ORLEANS is the great seaport of the South, and the centre of trade for the lower Mississippi valley. It exports cotton, sugar, rice, and corn. *Atlanta* is a manufacturing city and a railway centre. *Charleston, Savannah,* and *Mobile* have excellent harbors, and export cotton, rice, and lumber. *Birmingham* is the centre of the iron and coal industry of the South.

The Plateau Section. Name the states and territories of this section, and describe their elevation, rainfall,



FIG. 163—Showing Indians Gathering Salt, Colorado Desert

and drainage. What is the largest lake? This section contains very few people, the cities of Denver and Salt Lake City being the centres of the two most populous districts. Nearly one-third of the Indians of the United States are on reserves in this plateau.

The two great industries are *mining* of gold, silver, copper, lead, and salt (Fig. 163), and *ranching* of cattle and sheep. The shipment of minerals, live cattle, wool, and other animal products to the eastern markets constitutes the chief trade of these states.

Find on the map Yellowstone National Park, in Wyoming, which has been set apart by the United States Government. Its mountains, lakes, canyons, waterfalls, and geysers are points of great interest.

Denver is a railroad centre and a mining city. Near it are the mining towns of *Pueblo* and *Leadville*, and the popular summer resort *Colorado Springs*. *Salt Lake City* is handsomely built, contains the great Mormon Temple, and is an important trade centre; *Ogden* is a busy railroad city.

The Pacific Section. Name the three states of this section, and the capital of each. Describe their elevation, rainfall, and drainage.

Among the mountains of California is the Yosemite valley, famed for its magnificent scenery. At one place a stream falls 1,500 feet over the cliffs, forming the famous Bridal Veil waterfall (Fig. 164).

The population is rapidly increasing, and includes not only whites but also many Chinese and Indians. California was first settled (1849) because of the discovery of



FIG. 164—Bridal Veil Falls, Yosemite Valley, California

gold in its valleys, and it produces now very large quantities of this precious metal. The three states have become one of the rich agricultural districts of the continent. Wheat and other grains are raised in the northern valleys, and immense quantities of oranges, grapes, pears, plums, and other fruits in the

south. In some of the dry lands of the south irrigation is resorted to in the fruit culture. In the north lumbering in the dense forests and salmon fishing in the Columbia River give employment to many people.



FIG. 165—Picking Olives in the San Fernando Valley, California

SAN FRANCISCO is on the only good harbor on the Pacific coast of the United States; the entrance to the harbor is called the Golden Gate. It has a large trade with Hawaii, Japan, China, and Australia, and also by rail with the eastern cities of the Union. Much of the labor and a small part of the retail trade is done by Chinamen. *Oakland*, on the opposite side of the bay from San Francisco, is an important railway centre. *Los Angeles* is the chief city in the southern fruit region. *Portland*, *Seattle*, and *Tacoma* are rapidly rising towns, the last two being centres of lumber trade.

Distant Territories and Colonies. ALASKA is a Territory of the United States under a Governor and Board of Commissioners appointed by the Washington Government. Compare it in this respect with the Canadian Yukon. It was purchased in 1867 from Russia for seven millions of dollars, and is now valuable to the United States because of its fur-seal and salmon fisheries and its gold mines. The natives are Eskimos and Indians, and make up the greater part of the population. *Sitka*, on



FIG. 166—The Docks at Skagway

Baranof Island, is the capital, and *Skagway* (Fig. 166) is the outlet for the Yukon trade.

THE HAWAIIAN ISLANDS, a mountainous group in the central Pacific, constitute a Territory of the United States. The mountain Mauna Loa there is said to be the largest active volcano in the world. The climate is mild and healthful, and there is much fertile soil. Sugar, coffee, tropical fruits, and early garden vegetables are the chief products. The population in 1900 was 154,001, made up of natives, Chinese, Japanese, and whites. The islands were formerly an independent kingdom, and were called the Sandwich Islands, but were annexed by the United States in 1898. The beautiful city of *Honolulu* is the capital, the centre of a very large foreign trade, and a port of call for steamships crossing the Pacific.

PORTO RICO in the West Indies was taken from Spain in the year 1898. The chief productions are coffee, sugar, tobacco, tropical fruits, and salt. The capital is *San Juan*.

MEXICO, CENTRAL AMERICA, AND THE WEST INDIES

Mexico and Central America. Give the location of these two countries. What countries and waters surround each? What peninsula is the most easterly part of Mexico? What gulf and peninsula are in the extreme west? Describe the relief of Mexico and Central America. In what heat belts are they? Although they are in the tropical region, some of the mountains, even volcanoes, like Popocatepetl, near the city of Mexico, are covered with eternal snow. What is the general direction of the winds? Where are the regions of heaviest and lightest rainfall? Why are there no large rivers? What large lake is in Central America?

Much of the country, particularly in Central America, is covered with a dense tropical forest, in which are great numbers of monkeys, birds of bright plumage, insects, and reptiles of many varieties. Name a few kinds of trees in these forests? What are the products of some of these trees? A common tropical plant near the coasts is the



FIG 168—Drying Coffee on a plantation near Cordova, Mexico

agave or maguey (American aloe or century plant). From it is prepared sisal hemp, or hennequen, which is largely exported, and a fermented drink called pulque, much liked by the natives.

On the Mexican plateau there is a great deal of farming of a rude kind, and wheat, maize, cotton, coffee (Fig. 168), tobacco, and logwood are among agricultural products.

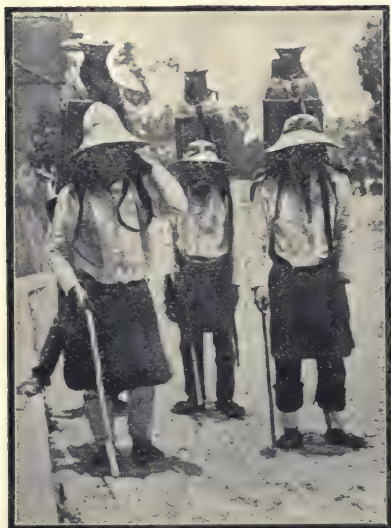


FIG. 169—Water-Carriers of Guanajuato, Mexico

Herding of cattle, sheep, goats, and horses is also a leading industry of Mexico, and products of the ranches are shipped to the United States. Mexico is rich in minerals, particularly silver and gold, and mining employs thousands of people, including many women and children.

Mexico is one large country, and Central America is made up of six small independent ones. All are republics with systems of government resembling that of the United States. In Mexico there are about fourteen million people, and in the States of Central America about five million. They consist almost entirely of Spaniards, Indians, and Spanish-Indian half-breeds. The majority of the laboring people are poor and ignorant (Fig. 169), living in huts of straw (Fig. 170), grass, or sun-dried clay (adobe).

The City of MEXICO is situated about 7,000 feet above the level of the sea on the plateau of Mexico. It is hand-



FIG. 170—A House in Central America

somely laid out, and has a splendid and costly Roman Catholic Cathedral. It is the largest city in this part of the continent. There are three seaports, one nearly south of Mexico, and the other two on the Gulf of Mexico. What are their names?

The Central American Republics have a population similar to that of Mexico, mainly of Spanish and Indian origin. The products of the country are also similar, and they export coffee, sugar, hides, and bananas.

In the new Republic of Panama, established in 1904, the Panama railway is built, and the ship-canal to connect the Atlantic and Pacific Oceans is in course of construction.

Cuba and Haiti. Locate these two islands. How do they compare in size with the other islands of the West Indies? Their climate is tempered by sea-breezes, and



FIG. 171—Morro Castle and the Lighthouse. Havana, Cuba

their soil fertile. They have the ordinary tropical products, the chief being sugar, tobacco, cocoa, coffee, and bananas. Cuba was formerly a Spanish colony, and a large proportion of its people are "creoles," or natives of Spanish descent, the others being mainly Negroes and mixed tribes.

It has been independent since June, 1901. *Havana*, the capital, is a city nearly as large as Montreal. It has many cigar and cigarette factories, and is also an important sugar market. It is the largest seaport in the West Indies (Fig. 171).

On the island of Haiti are two independent republics, Haiti and Santo Domingo. The former is a nation of Negroes and mulattoes, and was formerly a French colony. What is its capital? The latter was at one time a Spanish colony, and its people are chiefly a mixed race of Spanish and Indians, with some Negroes and mulattoes. What is its capital?

PORTO RICO in the West Indies was taken from Spain by the United States in the year 1898. The chief productions are coffee, sugar, tobacco, tropical fruits, and salt, and the resources of the island are being rapidly developed. The capital is *San Juan*.



Fig. 172

SOUTH AMERICA

Position and Extent. Find South America on the school globe. How is it situated with reference to the equator? Is it in the Land Hemisphere or the Water Hemisphere? (See Fig. 32, Part I.) What sea lies along the northern coast? What oceans are at the east and west? In what direction is it from North America? What joins it to North America?

In 1513 Balboa, a Spanish follower of Columbus, crossed this isthmus on foot and from the mountain summits near the south coast discovered the Pacific Ocean.

What is the general shape of this continent? Where is its broadest part? Where is its narrowest part? Which is the longest side? Which is the shortest? Find its greatest length and greatest breadth in miles as you did those of North America, and also the lengths of the three sides. Which is the larger of the two American continents?

Surface. Examine the relief map of South America and find where are the highest mountains of the continent. What are they called? Compare the length of the range with that of the continent. In what part of the world's great mountain system is it? (See Fig. 10.)

What large plateau is in the east? From this plateau arise several small mountain chains commonly called the Brazilian mountains. To what mountains in North America are they similar in situation?

What small plateau is in the north-east?

Vast plains lying between the Andes and these two plateaux make up the remainder of the continent.

The Andes. From their southern end the Andes extend in a single range half the length of the continent,

then they divide into two and enclose a high plateau. Name this plateau (Fig. 174). Its average height is more than two miles above the level of the ocean. Afterwards the mountains continue northwards in a single broad range until near the Isthmus of Panama where they divide into several smaller chains, one of which extends eastward along the northern coast.



FIG. 174—Across Country in Bolivia

Throughout their length the Andes form an almost unbroken wall of very lofty and rugged mountains (Fig. 175). Many peaks attain a height of more than four miles—the highest in America and second highest in the world. The loftiest peak is Aconcagua (23,900 feet) in the southern part of the range.

These mountains are remarkable for the great number of volcanoes throughout their extent—more than forty are active. Earthquakes also are at times violent everywhere

in the valleys, causing much loss of life and property. For this reason houses there generally consist of a single story.

The Andes are rich in minerals. Gold and silver have been extensively mined in the Bolivian plateau and in the mountains north and south of it almost ever since the region was discovered.



FIG. 175.--In the heart of the Andes
Shewing a tunnel

On the Bolivian plateau is a large lake about half the size of Lake Ontario (See map, Fig. 38). What is it called? Its waters are not drained to the sea, and are therefore slightly salty. A large trade is conducted on this lake, and there are several large towns and villages on its shores.

There are no roads in the Andes, the mountain sides are so steep and dangerous. Loads are carried by mules and llamas, and people often travel in chairs strapped upon the backs of native guides. In many places chasms can be crossed only by means of rope bridges. A railway has been built through the passes across the mountains between

Valparaiso on the Pacific and Buenos Aires at the mouth of the River Plata, and in some places stone and iron bridges make up a large proportion of its construction.

Climate and Rainfall. In what heat belts is South America? What belts contain the greater part of it? Where is the coldest part of the continent?

What is the common direction of the winds over the northern and central parts of the continent? Do they carry with them much or little moisture? Is the rainfall, therefore, heavy or light? When the sun is far south the winds blowing in from the ocean are also far south, and so there is a dry season in the north for a few months. In what months? But the amount of rain during the wet season is so great that the average for the whole year is high. Why is the amount of rainfall near the Andes larger in the north and smaller in the south? Why is the rainfall heavy on the western slopes of the southern Andes? Why is there scarcely any rain on the western slopes of the central Andes? This region, extending more than a thousand miles, is known as the Atacama Desert, and sometimes no rain falls there for years at a time.

The valleys and lowlands along the western coast near the equator are very hot and unhealthy. No snow falls in South America in the Hot and Warm Belts except on the summits and sides of the Andes. The snow-line in the Hot Belt is about three miles above the level of the ocean.

Drainage. On the relief map of South America trace your pencil around the basins drained by the Amazon River and its tributaries, and by the Plata and its tributaries. These two basins make up more than half the continent. What kind of rivers do you expect to find when there is heavy rainfall upon large basins?

What large river drains the northern slopes of the Guiana plateau and the plains north and west of it? Into what river are the southern slopes of the plateau drained?

The heavy rains often swell the Orinoco over its banks and the neighboring country becomes flooded. For this reason the natives near the river build their houses in the trees or on high posts. The river is broad and smooth except in the upper part of its course where there are several rapids.

The Amazon River flows more than four thousand miles to the Atlantic, though near its source it is only a few miles from the Pacific. From what direction does it receive the greater number of its tributaries? Name the four largest of these. Name two rivers flowing into it from the north. Name a river joining the Rio Negro with the Orinoco ("Rio" is a Spanish word meaning "river").

For the greater part of its course the Amazon flows through dense forests where there are no cities or towns. It is made up of a main stream and a network of smaller streams along both north and south banks, so that one can travel in a canoe for hundreds of miles and not see the main river at all. It is navigable for nearly its whole length, and at its mouth it broadens to a width of about one hundred miles.

What highland is on the east of the basin of the Plata? What one on the west? What are the chief tributaries of the Plata? The river itself is comparatively short, but it carries to the sea a great volume of water. The Great Falls shown in Fig. 176 are on a branch of the Parana on the border between Brazil and Argentina.

There are two large rivers south of the basin of the Plata which flow directly into the Atlantic. Name them.

The watershed across the Brazilian plateau is in some cases very low and scarcely noticeable like that between the Amazon and Orinoco. At one point two streams, one leading to the Amazon and the other to the Plata, are within three miles of each other, with a level grassy plain between them.

What large river drains the eastern slope of the Brazilian plateau directly into the Atlantic? In its upper course it is navigable for a long distance, but towards its mouth there are several high falls.

What is the watershed separating the rivers flowing into the Atlantic from those flowing into the Pacific? Why are there so few streams flowing into the Pacific?

The long, narrow valleys between the parallel chains of the Andes in the north may be regarded as separate river-basins. What is the chief river of these valleys? Where does it empty?



FIG. 176—Great Falls in Southern Brazil, sometimes known as
"The South American Niagara"

The principal drainage areas of South America may be named as follows:

- i. The basin of the Orinoco.
- ii. The basin of the Amazon.
- iii. The basin of the Plata.
- iv. The basin of the Sao Francisco.
- v. The Pacific slope.
- vi. The basin of the Magdalena.

The Plains. The great plains in the basin of the Orinoco are known as *llanos*, in the basin of the Amazon *selvas*, and in the basin of the Plata *pampas*.

The llanos are broad and nearly treeless. They have alternately a wet season and a dry season. In what time of the year is each? Account for each (See Section on Climate and Rainfall). In the wet season they are covered with excellent grass, affording pasture for great herds of cattle, sheep, and horses. The rivers become so swollen that they often overflow their banks and form swamps,

and the swamps soon become alive with alligators (Fig. 182), which devour the fish they so easily find. When the rainless season comes on, the whole region becomes hot and parched, herds seek, or are driven to, the mountains in the west; alligators, half covered with dry hard mud, lie in wait for any prey they can seize, and turtles and snakes bury themselves till the wet season returns.

The selvas are the vast forest-covered regions through which flow the Amazon and its tributaries. The rainfall is heavier and more constant on these plains than on the llanos, so that they are more or less swampy at all times of the year. In the swamps and forests the trees become tall, and matted together so closely by their own branches and leaves, and by vines that cling to them, that in many places sunlight is entirely shut out, and the forest is dark, dismal, and impassable. Many small tribes of Indians live near the streams, and these are the only inhabitants. But animal life is abundant. Jaguars, tapirs, alligators, anacondas, and boas are the largest wild animals found; the trees teem with monkeys (Fig. 181); the air is alive with parrots; humming birds, and other birds of brilliant plumage, and with flies, mosquitoes, and beetles, and

the rivers swarm with fish.

The pampas are the treeless plains of the south, and resemble in some respects the prairies of

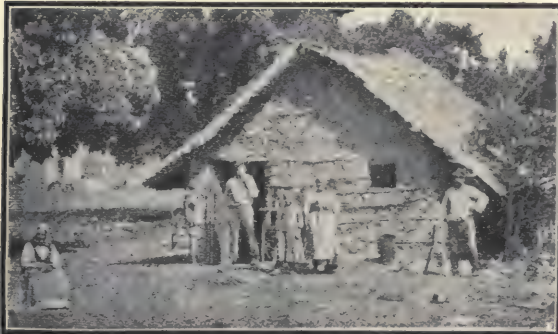


FIG. 177—A Shepherd's Hut, Argentina

North America. Where the land is not tilled it is covered with a very tall coarse grass bearing white feathery plumes, and the cultivated region is the great wheat-growing area of South America. Millions of half-wild cattle, horses, and sheep (Figs. 177 and 191), are herded on these plains by the *gauchos* (Fig. 178), the fearless cowboys of the country. These animals are the descendants of some of those brought into the country by the Spaniards more than three hundred years ago. The rhea, or American ostrich, a large bird taller than a man, runs in small herds upon the pampas, and as far south as Patagonia.

Coast-Line and Islands.

What cape is at the southern end of the continent? It is a steep rocky headland on Hermit Island. To save distance and avoid storms, steam vessels entering the Pacific do not "round the Horn" but pass through the strait a little farther north. Name the strait.

What capes form the eastern and northern points of the continent?

Find on the map any gulfs or bays in South America. Compare them in number and size with those of North America. The eastern coast-line of North America is said to be *broken*, and that of South America *even*. How does the coast-line of South America compare in evenness with that of the other continents?



FIG. 178—A Gaucho of the Pampas

The mouths of two rivers of this continent are broad, almost like gulfs. What rivers are they? A wide river-mouth in which the tides rise and fall is sometimes called an *estuary*.

Compare this continent with North America in the number of islands around it.

What group of islands lies just east of the Strait of Magellan? How far east of this strait are they? What other island is still farther to the east? How much farther? All these islands belong to Great Britain.

What island is separated from the mainland by the Strait of Magellan? Its name means "land of fire," and it is the largest of a group of mountainous and volcanic islands extending several hundreds of miles up the western coast of the continent. The few inhabitants it contains are Indians of a very degraded type.

What group of islands lies west of South America on the equator? They are noted for large tortoises, a variety of turtle, whose length is over six feet and weighs from one thousand to fifteen hundred pounds.

Draw a small map of South America like Fig. 186, and mark on it the names of the surrounding waters, the mountains, plateaux, plains, the principal rivers, and the coast features and islands.

Vegetation. The llanos, the pampas, and a large part of south-eastern Brazil are grass-covered or cultivated lands; the selvas are covered with dense forests; and the southern Andes are covered with open forests. Where and what is the name of the great desert of South America? In what heat belts and rainfall areas are the dense and open forests? Compare them in these respects with the dense and open forests of North America.

Although this continent has been known to Europeans for over four centuries and settled by them for much more than three, its forests have not been cleared to any great extent. The dark swampy jungles of the selvas have been scarcely touched, and only along the coasts or on the pampas have settlements been formed.

The vegetation of the selvas is so luxuriant and so varied

that it is almost useless to try to describe it by reference to a few specimens. The palm tree, of which it is said there are a hundred varieties in these forests, is found throughout the region of the Hot Belt and a large part of the Warm Belt. Rosewood and mahogany are well-known cabinet woods; from logwood a valuable dye is prepared; from the sap of the india-rubber tree is made the well-known rubber (Fig. 179); from the seeds of the cacao tree we get cocoa and chocolate; from the roots of the cassava plant we obtain tapioca and one kind of arrowroot.

The palm tree consists usually of a tall unbranched stem bearing a tuft of large leathery leaves and greenish flowers at the top. The uses of the palm are numerous. Sugar, wine, oil, wax, fibre for cordage and matting,



FIG. 179—A Rubber Tree, showing a native emptying the cups containing the sap, Para, Brazil

beams, veneers, canes, thatch, spoons, bowls, fans, and hats are only some of the products it yields or articles which can be made from it. From one kind we get rattan, used so much in certain kinds of furniture; from another sago, which is a granulated starch from the pith of the tree; and from others dates and coconuts. The date palm is not found in South America except in a few places where it is cultivated.

Palm oil is obtained by crushing the fruits of one variety of the tree and boiling them with water, when the fatty matter rises to the surface and is skimmed off. It resembles butter in color and consistence, and is eaten as such by many people. In Europe it is used in the manufacture of candles and soaps, and for oiling heavy machinery such as the axles of railway engines and cars.



FIG. 180—Coffee Plantation, Araraquara, Brazil

On the eastern slopes of the northern Andes grow several varieties of an evergreen tree called the cinchona. The bark of this tree is called Peruvian bark, and from it the drug quinine is made.

In the northern half of the continent corn and rice are the chief grains cultivated, and sugar, cotton, coffee (Fig. 180), tobacco, spices, and fruits are raised in abundance. What is the great agricultural product of the pampas? What is pampas grass?

When the Spaniards came to Peru, on the west coast, they found potatoes growing wild, and they brought some of them to Europe. It was not, however, till 1586, some eighty years afterwards, that English settlers on the Atlantic coast of North America under Sir Walter Raleigh introduced potatoes from Virginia into Ireland.

Draw a small map of South America, like Fig. 186, and on it name as many products of the soil as you can in their proper localities.

Animals. The animal life of the silvas is abundant, and nearly all kinds found there are also found northwards in the forests of Central America and southern Mexico. Many are small and adapted to living in the trees or flying about in the air. Monkeys spend their lives in the trees, eating the fruits which are so plentiful, and scarcely ever coming to the ground except when they need water (Fig. 181). The parrot, humming bird, and other birds of brilliant plumage that are very poor singers, and insects of many varieties are found in countless numbers. Plant-eating animals that live on the ground are not so numerous; the only ones that need be named are the peccary,



FIG. 181 Monkeys on the Amazon



FIG. 182—Alligators ; animals found only in the warm waters of tropical and sub-tropical regions

which is a small wild hog roaming in herds, and the tapir, another hog-like animal living near the water in the dark and secluded parts of the forest.

The presence of so many weak and timid forms of animal life ensures the presence also of their flesh-eating foes.



FIG. 183—Condor

Among these are the great ant-eater, which tears down ant hills with its strong front claws and draws the ants into its long tubular mouth by means of its red worm-like and sticky tongue ; the little armadillo covered with a hard shell, and living on insects and carrion, and the puma and the jaguar which lurk in the darkness of the forests and pounce suddenly upon their unwary prey. The swamps and flooded streams are infested with crocodiles, which resemble the

North American alligator (Fig. 182), in appearance and habits. The chief snakes are the boa and the anaconda, the former often twenty feet long and the latter thirty, both of which seize small animals such as rats, birds, lambs from the flocks, and even ant-eaters, coil around them, crush them to death, and devour them.

What animals are herded on the pampas? What birds run wild on those plains?



FIG. 184—A Herd of Llamas in Peru

In the Andes there are two very useful animals which have been domesticated—the llama (Fig. 184), and the alpaca. Both are covered with silky wool. How do you account for the presence of wool-covered animals in the Hot and Warm Belts?

The llama is a little larger than a sheep, and is very docile. It is valuable for carrying silver ore and other merchandise down the mountain sides, its wool is woven into cloth, and its milk and flesh are used as food.

The alpaca is of about the same size as the llama, and resembles a long-necked and long-legged sheep. Large herds are kept in the central and southern Andes, and great quantities of their wool (also called *alpaca*) are shipped to Great Britain.

The Andes are also the home of the condor (Fig. 183), a huge bird that lives on carrion. It also carries away lambs, young llamas, and other small animals from the settlements, and is therefore much disliked in the regions it infests.

History and People. When the Europeans first came to South America they found it peopled with tribes of Indians, most of whom were savages. One tribe, however, in the plateau of Bolivia, called the Incas, or ancient Peruvians, had attained a high degree of civilization. These people lived in stone houses, and built large temples for the worship of the sun, strong fortresses in which to defend themselves against surrounding tribes, and immense bridges better than the Spaniards could construct. They made good pottery, wove coarse cloth from the wool of the llama and the alpaca, and, knowing nothing about iron, used copper and stone implements. Their kings, also called Incas, were wealthy, and their government seems to have been well managed. Their capital was the city of Cuzco, —founded, it is believed, fully five hundred years before Columbus came to America,—once famous, but now in ruins. Pizarro, a Spanish general, conquered these people and treated them with great cruelty, and before long the Spaniards overcame many other Indian tribes and took possession of nearly all the western part of the continent.

The eastern part of South America was colonized by the people of Portugal, another European country. Many Portuguese and descendants of Portuguese now live in Brazil, the large country in the east. There are also many Negroes in Brazil, who were held as slaves until only a few years ago.

During the past one hundred years the various states of South America obtained their independence from Spain and Portugal, and now the only part of the continent held by countries of Europe is in the Guiana plateau, where the British, the Dutch and the French have small colonies.

There are Indians in all parts of the continent, and in some places they are almost the only inhabitants. Along the Orinoco are the tree-dwellers, already mentioned. In the selvas are many tribes (Fig. 185) which hunt with spears and blowguns; with the latter weapon they blow poisoned arrows at game. It has been remarked that the natives of these forests "eat the small alligators, and the large alligators eat the natives." The Indians of the extreme south are the Fuegians and are perhaps the most degraded people in the world, "their dwellings consisting merely of a few poles placed upright in the ground and thatched with grasses and rushes, their clothing made up solely of a tunic of skin or rudely woven cloth suspended by cords from their necks, and their highest ideal of happiness being to gorge themselves with whale's blubber."

What are the herdsmen of the pampas called? They live almost entirely in the saddle, and besides being expert and daring horsemen are skilled in the use of the lasso and the bolas. The lasso is a long rope with a large loop at one end by which cattle and other animals may be caught. The bolas consist of two or three balls of stone or metal connected by ropes, and this whole weapon is thrown at animals in such a way as to entangle

them and bring them down. The gauchos are wild and courageous, but are very polite and hospitable. They are of Spanish descent.

The whole population of this continent has been estimated at about forty millions.

State what you think are the chief occupations of the people of South America in different localities of the continent. In what parts do you consider them the most prosperous? Why?

The majority of the white people of the continent are Roman Catholics and speak the Spanish or the Portuguese



FIG. 185.—Natives of the Selvas

language. The Indians are mostly pagan in religion, and talk several languages or dialects of their own. In the Guiana plateau are British, Dutch, and French settlers, who speak the languages of their mother countries.

Subdivisions. South America is divided into eleven countries. The boundaries are not in all cases definitely settled, and frequently war arises over some disputed territory. All have the republican form of government, except the one on the Guiana plateau.

What country is in the basin of the Orinoco? What is its capital? This city has been visited by some disastrous earthquakes.

Name the five Andean countries and the capital of each. Which of them has no coast-line? Chili is the most important country of the group and Peru is second.

What large country contains the pampas and extends to the southern end of the continent? What is its capital? This is the second most important country of the continent, and Buenos Aires is the largest city. What are the two small countries at the north-east of Argentina? Some parts of them are elevated, and even mountainous. What is the capital of each?

Where is Brazil? How does it compare in size with the other South American countries?



FIG. 186

Outline Map of South America

It contains nearly one-half of the people of the continent, and is the most important country commercially in South America. What is its capital?

The remaining country is the one on the Guiana plateau. What is it called? It is owned by three European nations, Great Britain, the Netherlands, and France, and its sub-divisions are therefore called British, Dutch, and French Guiana. Which is the largest? Which is the smallest? What is the capital of each?

Draw a map of South America (Fig. 186), and mark on it the countries and their capitals.

Brazil. How does this country compare with the others of South America in size, population, and commercial im-



FIG. 187—Railway near Rio Janeiro

portance? How does it compare in size with Canada? Describe its heat, winds, rainfall, drainage, and forests.

There are in Brazil about three times as many people as in Canada. Nearly all of these are near the coast, only Indians living in the dense forests of the interior. Negroes make up about one-seventh of the population, being very numerous in the coast towns. From what European people are the greater number of white people in this country descended?

As Brazil is so large we may expect to find many varied industries and products. The majority of the people are engaged in agriculture. More than half the world's coffee crop is raised in south-eastern Brazil, and sugar, tobacco, cotton, india-rubber, cocoa, and tapioca are cultivated in other parts, chiefly in the east and north. Cattle ranching is an important industry on the borders of Uruguay. The mines of Brazil are rich, and though not fully worked yield coal, gold, diamonds, petroleum, and many other minerals. Manufactures are backward, but cotton and woollen mills are increasing in number.



FIG. 188—Rio de Janeiro

RIO DE JANEIRO (Fig. 188), the capital, is the second largest city in South America. It is situated on a very fine harbor, and has important exports of coffee, sugar, and diamonds. *Sao Paulo* is another thriving city in the south-eastern coffee district (Fig. 189), and *Santos* is its seaport, the latter rivalling Rio de Janeiro in the amount



FIG. 189—Railroad Station, Sao Paulo, Brazil

of coffee exported. *Bahia* is the second largest city in the republic, and has large exports of sugar, tobacco, cocoa, and diamonds. *Pernambuco* is the chief centre of the sugar manufacture and export, and *Para* is the exporting point for the great india-rubber trade of the Amazon valley.

Argentine Republic, Uruguay, Paraguay. In what part of South America are these three countries? Describe their surface. What is the name of the great southern plains of the continent? The part in northern



FIG. 190—Indians of the Gran Chaco, Paraguay

Argentina and western Paraguay is called the *Gran Chaco* or *great hunting ground* (Fig. 190). In what heat belts are these countries? To what part of North America do they correspond? Describe and account for the direction of the wind and the extent of the rainfall. In what great river basin is this region? Name some of the largest rivers?

The Argentine Republic has a population of about five millions, Uruguay about a million and Paraguay about half a million. The majority of the people are of Spanish



FIG 191—Getting ready to saddle Wild Horses

origin, but Italians are very numerous. The Indians of Patagonia are very degraded in appearance and habits.

The two great industries are agriculture and ranching. Wheat, maize, and other grains yield enormous crops in eastern Argentina and southern Uruguay, and oranges, grapes, sugar-cane, and tobacco are cultivated in the west and north-west of Argentina, and in Uruguay and Paraguay. The dense forests of Paraguay are full of both hard and soft wood, and in the cleared lands great quantities of maté, or Paraguay tea, are grown. Cattle and horses are herded on the pampas in the centre of northern Argentina, and sheep in the coast region farther south. Who are the gauchos? There is also important cattle-ranching in northern Uruguay.

BUENOS AIRES, capital of the Argentine Republic, is the largest city in South America (Fig. 192). It is the chief seaport of the Plata basin, and its exports are mainly the products of the grain and fruit farms and the ranches of the surrounding country. What are some of these? *Montevideo*, capital of Uruguay, is larger than Toronto, and has



FIG. 192—Old Residence of Spanish Viceroy in Buenos Aires

a great foreign trade similar to that of Buenos Aires but smaller. What is the capital of Paraguay?

Chile and other Andean Countries. Name the five countries of the Andes.

Chile is the third in importance of the countries of South America. What advantages and disadvantages has it in climate? Agriculture is one of the chief occupations of its people, although in some places the rainfall is so light that irrigation is necessary for successful farming. Where is the Atacama desert? The principal mineral product of this country is "nitrate of soda" or Chile saltpetre, of which more than a million tons is mined every year.

All the Andean countries are rich in minerals, particularly gold and silver. Many large towns have grown up in the silver-mining districts of Bolivia. The northern countries have the usual forms of vegetation peculiar to countries of the hot belt. Name some of these. What is Peruvian bark?

Many of the large cities of these countries are inland because of the mining and agricultural industries of the interior, and the harbors on the coast are very rare. Short railways connect some of them with their ports, but nearly all the roads are bridle paths, or mule and llama-tracks

(Fig. 193). Why? What is the capital of Chile? It is larger than Montreal. What is its seaport city? What is the capital of Bolivia? *La Paz* is the largest city of Bolivia, and the temporary capital. Name the capital and the only seaport of Peru? What is the capital of Ecuador? "There no one talks of the weather, for it is always pleasant." It is the highest city of its size in the world, being nearly two miles above the level of the ocean, and eleven



FIG. 193—A Chilian Native and his Wives

volcanoes may be seen from its public square. What is its seaport? This seaport is the largest city in Ecuador. What is the capital of Colombia?

Venezuela and Guiana. Where are the highest mountains in Venezuela? They are a spur of what great range? In what river basin is Venezuela? Is Guiana higher or lower than Venezuela? Describe the course of the winds and the extent of the rainfall in these countries. Where are the forest regions? What are the llanos?

Sugar is raised along the whole coast, and coffee in some parts of Venezuela. In the llanos immense numbers of cattle, sheep, goats, and hogs are herded, and in the forests of Venezuela india-rubber is gathered. The Guiana highland is rich in gold, and some diamonds have also been found there.

What is the capital of Venezuela? What are the three political divisions of Guiana, and what is the capital of each? In what way are we familiar with the name Cayenne? French Guiana is used as a penal colony.



FIG. 196—RELIEF MAP OF EURASIA



EURASIA (EUROPE AND ASIA)

Position and Extent. Find on the school globe the continent of Eurasia. With what other continent is it joined? What two seas separate these two continents? What isthmus joins them? So in the Eastern Hemisphere we find two great land masses joined by an isthmus just as we did in the Western.

Is Eurasia north or south of the equator? What oceans are at the north, west, south, and east? What continent is directly east of it? What three oceans and strait separates it from this continent? How does Eurasia correspond in size with the other continents of the world? What is its general shape? Which two sides are nearly equal in length? Find its greatest length and breadth, as you did those of North America and South America.

From very early times Eurasia has been considered as made up of two parts, Europe in the west and Asia in the east. Find on the relief map of Eurasia the Ural Mountains, the Caspian Sea, and the Black Sea. These are on the dividing line between the two parts.

Asia is the largest and most populous of the grand divisions of the land, and the oldest in history of any part of the world. Europe is fifth in size (Australia being smaller) and second in population, and has been noted for thousands of years for its civilization, and for its commercial and military enterprise.

Surface. Trace and describe accurately the course of the world's great mountain system through Asia, and through Europe.

Now study the relief map of Eurasia. Observe that the whole continent is made up of two parts, the elevated and



EURASIA

SCALE OF MILES
0 500 1000



mountainous portion in the south and the low plains in the north. Which is the larger of these two parts? Compare them with each other in length, breadth, and general shape.

Find the Pamir plateau near the centre of the map. From this plateau several ranges of mountains extend in different directions. It is sometimes called "the roof of



FIG. 196 —A Group of Dervishes (Religious Mendicants) Persia

the world" because the highest and grandest mountains of the earth are in and near it.

Extending westwards from this plateau is a chain over four thousand miles in length, reaching the Atlantic Ocean. The ranges in this chain are known by different names in different parts. What is the name of the one between the Pamir plateau and the Caspian Sea? South of the Caspian? Between the Caspian and Black Seas? North of the Italian peninsula? The highest peaks in the Hindu Kush are nearly four miles above the level of

the sea, in the Caucasus about three and a half miles, and in the Alps about three miles.

The Alps extend a distance of about eight hundred miles, and are the most important mountains west of the Black Sea. The highest peak is Mont Blanc (15,781 feet) and there are several others nearly as high. The snowfall is heavy, avalanches are frequent, glaciers are numerous, and several large and important rivers take their rise in these mountains. They are visited annually by thousands to enjoy the magnificent scenery here afforded, and to climb the many peaks. The Alpine flowers are famous, many of them being large and showy, growing on low wiry plants which make their way up through the snows on the mountain sides.

Eastward from the Pamir plateau are three chains, one extending north-east, one east, and the third south-east. The first two of these join in the north-eastern part of the continent and form a single chain which runs through to Bering Strait. The Thian Shan, the Altai, and the Kuenlun Mountains are all about as high as the Hindu Kush, but the other ridges in the north-east are comparatively low.

South-eastward from the Pamir plateau extend the massive Himalaya Mountains. These are the highest mountains in the world, some of them reaching an altitude of nearly five miles and a half. From the south they appear like a vast mountain wall, in many places covered with snow for two miles down from their summits, but from the high plateau on the north they seem to be only a moderately low range. The loftiest peak is Mount Everest, 29,000 feet high.

Between the Kuenlun and the Himalaya Mountains is the plateau of Tibet, the highest large plateau of the world. The people of this plateau herd camels, goats, sheep, and yaks.

Besides the plateaux already named there are four others, which are along the southern coasts. Name them. Which are the largest and smallest plateaux of Asia?

The great northern plain extends from a strait in the far north-east to a bay in the far west. What are the names

of these? What mountains are on its southern border near the centre? What mountains cross it from north to south near the centre? The latter mountains average about half a mile in height, none of the summits being more than about one mile high. They are rich in the rarer and more valuable minerals, such as gold, platinum, and diamonds. Name the part of the northern plain east of the Urals. The part west of these mountains is generally called the great European plain.

The land around the northern end of the Caspian Sea is more than eighty feet *below* the level of the ocean, and the small valley around the Dead Sea near the Isthmus of Suez is about 1,300 feet below. How many miles is the Caspian lowland from the highest land in the world?

What smaller plains are south of the Himalayas and on the eastern coast? They are fertile and densely populated.

Draw a small map of Eurasia, and on it name the mountains, plateaux, and plains.

Climate and Rainfall. In what heat belts is Eurasia? In what one is nearly all Europe? Find on the map the Lena River in north-eastern Asia. The region through which this river flows is believed to have the coldest winters in the world. The southern and south-eastern coasts of the continent are very hot all the year round, and between these cold and hot localities are all grades of temperature.

What is the general direction of the winds over Europe? Do you think they are cold winds or warm winds? Why? Why is there heavier rainfall in western and southern Europe than in eastern Europe?

What is the general direction of the winds in south-eastern Asia? Are those winds cold or warm? What extent of rainfall do they yield?

What are monsoons, and where do they blow in Asia? How do they affect the amount of rainfall in the regions over which they blow?

What parts of Asia have little or no rainfall? Account for this by reference to the direction of the winds and the location of high mountain ranges. Find the names of the deserts in east central and south-western Asia.

There is snowfall throughout all Europe and that part of Asia north of the Himalayas. The amount is, of course, much greater in the north than in the south.

Drainage. Trace a line on the map from Bering Strait to the Bay of Biscay to mark off the slope drained into the Arctic and Atlantic Oceans. What direction does this line take at the Ural Mountains? Compare with each other its distances from the northern coast east and west of these mountains. Name the three great rivers flowing north through the Siberian plain. These rivers and their branches form a system of inland navigable streams extending for thousands of miles. The chief drawback in their navigation is that their mouths are frozen for almost the whole year, thus keeping out any ocean-going vessels. What lake is drained by the Yenisei River? It is the largest fresh-water lake in Eurasia. What is the chief tributary of the Obi?

As the western part of this northern slope is much narrower than the eastern, the rivers are shorter, but as it is much more fertile, and has a milder climate, they are of greater value in commerce. Find out the names of the larger ones (page 226). Name the two lakes drained by the River Neva.

At the southern end of the Ural Mountains are two large inland salt-water seas. What are their names? Several large rivers flow into them, but none flow out. Why do the seas not overflow their shores and flood the surround-

ing countries?

East of the Aral Sea are some small salt-water lakes which also have no outlets. Trace your pencil on the map around the basin drained into these seas and lakes. It may be called the Caspian basin. What are the names of the two large rivers flowing into the Caspian Sea?

Which of them is the larger? The Volga is the largest river in Europe, is an important trade route, and has valuable sturgeon fisheries.

In the mountainous district of Eurasia the largest slope is the one occupying the south-eastern part of the continent. Its rivers rise in the high plateaux of the interior, and after long courses reach the waters of the Pacific and Indian Oceans. What large river rises in the mountains north of the Desert of Gobi? What two rivers rise in the plateau of Tibet and flow through the plains of China? Compare the lengths of these three rivers. The Hoang, or Yellow, River carries down with it much yellow sediment which becomes lodged in the slower parts of the stream, sometimes causing the waters to change their course, flood large areas, and destroy much life and property. It has upon it, therefore, very few towns of importance. The Yang-tsi is navigable for more than 1,000 miles from



FIG. 197—A Castle on the banks of the Rhine, Germany

its mouth, and is one of the great commercial highways of the continent. It has many large and important cities on its banks. Name three large rivers which rise in the plateau of Tibet, and flow in a southerly direction. These rivers have very narrow basins separated by high mountain chains, and are not navigable for any great distance from their mouths. Where does each empty? Find three rivers which rise in the Himalayas, two on the north side of the mountains, and one on the south. The Ganges flows through the great fertile plains of India, is navigable for more than a thousand miles from its mouth, and has on its banks many large and important cities. Trace the courses of the Brahmaputra and Indus around the eastern and western ends of the Himalayas. They enter the plains of India through deep gorges in the mountains. Where does each empty? The sediment carried down by the Brahmaputra and Ganges rivers is deposited at their common mouth in the form of a large triangle, through which many divisions of the river flow in various directions. A river mouth of this kind is called a *delta* because it resembles in shape the ancient Greek letter *delta* (Δ).

The south-western slope lies between the mountains extending westwards from the Pamir plateau, and the southern coasts of the continent. In one respect it resembles the slopes on the west of the Rocky Mountains in North America — it contains a large number of small river basins. Find two basins, one whose rivers flow into the Persian Gulf, and one whose rivers flow into the Black Sea. Name two rivers in each of these basins. The rivers of the Black Sea basin flow through a flourishing agricultural district, and are important internal trade routes.

Draw a small map of Eurasia, and on it mark, by means of dotted lines, the slopes and basins, and name the chief rivers, lakes, and inland seas in each.

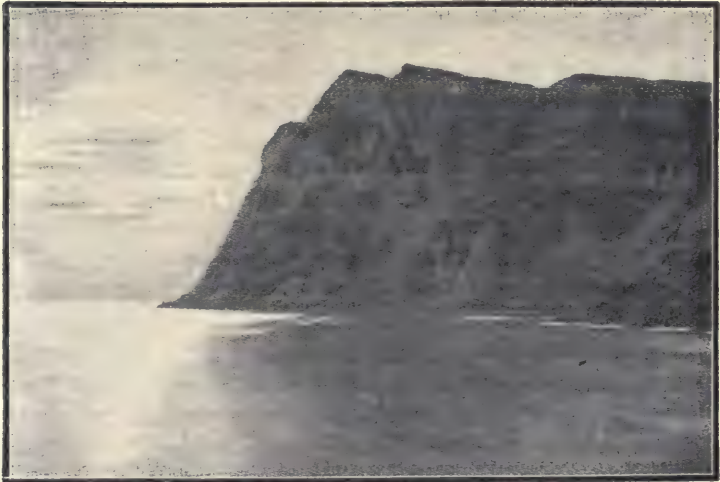


FIG. 198—North Cape, Norway

Coast-line and Islands. Compare the coast-lines on the three sides of Eurasia. Which is the most even? Which is the most uneven? Name the most important capes of the Continent (page 226). Which coast has the largest peninsulas? Off which is the greatest number of large islands?

Name one large bay and three seas on the northern coast. The Bay of Biscay is noted for its storms. The North Sea is shallow, and is noted for its valuable fisheries. From the Baltic Sea several arms extend into the land. Which is the largest of these? This sea receives four or five large rivers from the great northern slope, and its waters are therefore only slightly salty. The White Sea has upon it a little trade during the four or five months in the year when it is not covered with ice. What is the large peninsula west of the Gulf of Bothnia? The western part of this peninsula is very mountainous and the coasts

are high, rocky, and deeply indented with fiords. On the eastern side of the North Sea is a small flat peninsula extending northwards. What is it called? Name the groups of large islands off the north coast. Of these the British Isles are the only important ones, the others being snow-covered and ice-bound for nearly the whole year, and almost entirely uninhabited. The British Isles are near the centre of the land hemisphere.

Find the Mediterranean Sea on the map. What does its name mean? The ancient people who named it thought the earth was flat and the only land in the world was what lay around this sea. What strait joins it with the Atlantic Ocean? Name three large seas connected with it. Name four large peninsulas which border it. There are several large islands in this sea, and these are owned by different countries of Europe. The inlets from the Indian Ocean include two seas, a gulf, and a bay. Name them. What strait joins the Red Sea with the ocean? What strait connects the Persian Gulf with the ocean? What peninsula lies between the Red Sea and the Persian Gulf? What one between the Arabian Sea and the Bay of Bengal? What one east of the Bay of Bengal (Fig. 199)? What peninsula forms the southern extension of Indo-China? What large island lies south of the Deccan? It is a valuable British colony.

The group of large and small islands south-east of Indo-China are known as the East Indies. What large island is south of Malay peninsula? What strait separates it from the mainland? What island is a little farther south-east? The latter is the most densely populated of the East Indies, and exports a great deal of coffee. What large island is east of Malay peninsula and on the equator? What large one is just east of the latter? What strait separates the last two islands? The line passing through this strait and

southwards a little east of Java is regarded by some authorities as the south-eastern boundary of Asia. The islands east of this line form part of the group known as Australasia.

Along the eastern coast of the continent there is a succession of seas and peninsulas, and in some cases the



FIG. 199—A Typical Siamese Nobleman and Family

former are enclosed by rows of islands. Name in order the five seas, beginning at the north. What strait is at the north-east? From what does it separate this continent? For what is Bering Sea valuable commercially? The sea of Okhotsk is bordered by a peninsula on the east, a group of islands on the south, and one large island on the west. Name all these. The northern half of the island of Saghalien belongs to Russia, and has a colony of more than six

thousand convicts working in the coal mines. The southern half now belongs to Japan. Find on the map the island of Formosa. A row of islands extends from this island about two thousand miles to the peninsula of Kamchatka. Name in order the groups which make up this row. Japan rules over all these islands, including Formosa, and is a strong progressive country with which the European and American nations are developing an extensive trade. What peninsula forms the south-western boundary of the Japan Sea? What large gulf extends north-westwards from the Yellow Sea? What group of islands forms the eastern boundary of the China Sea? These islands belong to the United States of America. What large island lies near the mainland in the northern part of the China Sea? It belongs to China. What gulf separates Hainan from the mainland? What gulf is connected with the China Sea at the south-west? Find the small island of Hong Kong near the coast about half way between Formosa and Hainan. This is a British possession, and is the centre of a large trade between China and other countries.

Draw a small map of Eurasia, and on it mark the chief coast features and islands.

Vegetation. The part of the Siberian plain bordering on the Arctic Ocean is called the *tundras*. These are plains on which there is scarcely any vegetable growth because of the cold bleak winds from the north and west, and because of the frozen or swampy nature of the land. In some places the ground is frozen several hundred feet deep and is covered with snow for eight or nine months of the year. In summer this snow melts to form vast swamps or pools of water upon the frozen ground.

South of the tundras is a belt of forest-covered country stretching across the continent from the Atlantic to the

Pacific. In the valleys and on the plains of western Europe these forests have been cleared away, but in the east from the Baltic Sea to Kamchatka their average width is nearly one thousand miles.

The great wheat regions form the next belt, bordering the forests, and extending from the Bay of Biscay to the Sea of Japan, except where interrupted by the deserts of central Asia. Wheat and other grains grow as far north as the British Isles and the shores of the Gulf of Bothnia, and as far south as the valley of the Ganges. Find on the map the region along the lower Volga and Ural rivers, and north of the Aral Sea as far as the basin of the Obi. This region is called the *steppes*. In its northern portion it consists of vast treeless fertile plains, like the American prairies and pampas, on which large crops of grain are raised and on which wandering tribes pasture great herds of fat-tailed sheep, cattle, and horses, and use camels as beasts of burden. Near the Caspian Sea the land receives little rain and is more or less covered with salt; it is therefore barren. How do you account for the presence of the salt?

The remaining belt of vegetation across Eurasia, narrow in Europe and broad in Asia, has plants which vary according to the heat belts in which they grow. The European portion is the great grape region. From the grapes are prepared raisins, currants, and many kinds of wine. Oranges, olives, lemons, and other southern fruits are cultivated in the same localities. In the Asiatic part of this belt large crops of cotton, tea, millet (a grain used as food), rice, and poppies (from which opium is obtained) are raised abundantly. The forests of parts of India, nearly all of Indo-China, and practically all of the East Indies, are the usual dense tropical ones, some of the characteristic trees being teak (a hard, durable wood,

capable of taking a fine polish), bamboo, palms, india-rubber, and the banyan. The last-named is a kind of fig, the branches of which send down shoots which take root in the ground and serve as props to the widely spreading tree.

Compare Eurasia with North America with reference to (i) tundra regions, (ii) northern forest belts, (iii) grain belts, (iv) deserts, (v) southern fruit regions, (vi) southern forest regions. In what heat belts and rainfall areas are these different regions?

Draw a small map of Eurasia, and on it indicate the great tundra, forest, wheat, grape, and desert regions, the steppes, and the chief products of the soil in southern Asia.

Animals. Owing to similarity of position on the earth and nearness to each other, the continents of Eurasia and North America are much alike in animal life. Only in the extreme southern parts of the two continents are there many marked differences.

The parts of both continents that are in the cold belt have the same kinds of animals. Name some of them.

The parts of the continents in the cool belt also have many animals in common. This is especially true of fur-bearing animals. Bears, wolves, foxes, deer, panthers, wildcats, ermines, badgers, sables, and otters abound in the forests. The elk and the reindeer of Eurasia are said by some to be the same as the moose and the caribou of North America.

The wild reindeer lives in herds in the snow-covered countries of the north, and feeds upon "reindeer moss," to obtain which it scrapes away the snow with hoofs and antlers. It is shot and trapped for its flesh and hide. The same animal is also domesticated and forms the chief wealth of the Laplanders, a people of northern Europe. It draws their loads, and provides them with milk, meat, and clothing.

Throughout Europe nearly all ferocious animals have disappeared. Why? The mountains of Europe and



FIG. 200—The Yak

central Asia have many varieties of animals of the sheep family, such as the Cashmere goat, Angora goat, chamois, antelope, and ibex, all of which climb up and down the precipices with ease. Leather and wool are valuable products of some of these animals.

In the highlands of central Asia the yak (Fig. 200), which resembles a cow in appearance and size, is domesticated. It serves as a beast of burden. Its long black hair is woven into cloth, and its flesh and milk are used as food.

The deserts of central and western Asia, and northern Africa are the home of the camel, by far the most useful animal to man in those parts of the world.

The camel is specially adapted for travelling across the desert. His broad feet have thick soles to protect them from the hot sands, while bunches of hair over his eyes and his power of closing his nostrils prevent his becoming blinded or choked during a sandstorm. The hump consists of fat which serves as a store of reserve food, and its size is an indication of the animal's condition. The Arabian and African camels have one hump

and the Bactrian camel has two. The animal can carry six or eight quarts of water in his stomach, and use it little by little as he needs it. Owners dying of thirst in the desert sometimes kill their camels to get this water. Though awkward in movement the swift riding dromedary can go as far as one hundred miles in a day, and can travel from thirty to forty-five miles a day for ten days, carrying his driver and a supply of food for man and camel for the whole journey. A common name for the camel is "Ship of the Desert."

In traffic across the desert a large number of merchants with their camels and loads of food and goods join together for company and protection, and make their journey which sometimes lasts for several weeks or months. Such a company is called a *caravan*. In what way do you think an oasis is valuable to a caravan?

Western Asia is the original home of our horses, cattle, sheep, and swine. The horse seems to have been trained at first for battle, but at a later date has almost entirely taken the place of the ox and the ass as a beast of burden. Wild boars are yet found in the forests of western Asia, and southern Europe.

The country south of the Himalayas is considered a different region of animal life from that north of those mountains. The high and rugged mountain wall has proved an effective barrier against the passage of many animals either into or out of the region. Bears, wolves, wild boars, wild sheep, and wild goats have been able to cross the barrier, and, therefore, many of them are found on the southern slopes of the Himalayas. "Pig-sticking," or hunting the wild hog, is a very popular sport of Europeans in that region. But many animals, both plant-eating and flesh-eating, are found in the south that are very different from those north of the mountain barrier.

Many of the plant-eating animals are used by the natives. The buffalo and the zebu draw carts, plough, and do other work. The flesh of the latter is eaten, the hump between its shoulders, which sometimes weighs as much as fifty pounds, being esteemed a dainty. The Indian elephant ploughs, carries heavy loads of goods, and



FIG. 201.—Trained Elephants, India

conveys people from place to place (Fig. 201). Among wild animals are the tapir, with white body and black head and limbs, the orang-utan, which is an ape nearly as large as a man, and the rhinoceros, a huge hog-like animal with a sharp "horn" growing upwards from the end of his nose.

In some places there are broad areas overgrown with grasses, bamboos, and other plants, so as to be in some places very close and tangled. These are known as *jungles*, and are the haunts of leopards and tigers, and occasionally of lions. The "Royal Bengal Tiger" is one of the fiercest of animals, and is much feared because he

often attacks man. Other flesh-eating animals are crocodiles, which infest the rivers, and the cobra-da-capello, or "hooded snake," the bite of which proves fatal.

This region is the original home of the peacock, that has such beautiful plumage, and such an unmusical voice.

History and People. The history of Eurasia goes back to the earliest times of which we have any record, either in the writings or in the conditions of the people, when south-western Asia, India, and China were the seats of prosperous and comparatively civilized nations.

The people of India and China, according to their own writings, were great nations in very early times, and attained a considerable degree of culture. They were familiar with the art of printing, the manufacture of paper, silk, and gunpowder, and the use of the mariner's compass, long before these were known in the west.

But records are more complete and reliable about the west than the east. Great empires rose and fell in the valley of the Tigris and Euphrates rivers, in which were the once mighty cities of Nineveh and Babylon. The Phœnicians, who lived on the shores of the eastern end of the Mediterranean, became the greatest commercial people of their day. The Greeks built up a brief dominion in south-eastern Europe which had a powerful influence upon the literary and art development of after times. Alexander the Great, a foreign king who ruled over Greece, conquered nearly all western Asia from the Mediterranean to the Aral Sea, but his empire was broken up at his death. Afterwards the Romans, from the Italian peninsula, established an empire which eventually stretched from Great Britain and Spain in the west to the Caspian Sea and the Persian Gulf in the east. The Roman Empire has left its impress on the legal and military institutions, and on the languages of many nations of to-day.

It was in the days of the Roman Empire, nineteen hundred years ago, that Christ was born in the little village of Bethlehem near the Mediterranean. His followers have become divided into three large religious bodies, the Roman Catholics, the Protestants, and the Greek Church.

Six hundred years after the time of Christ another prophet, Mahomet or Mohammed, established a new religion which spread over south-western and southern Asia, and south-eastern Europe, and was accepted by millions of people.

Previous to the birth of Mahomet Europe was overrun by tribes of barbarians from central Asia, the Roman Empire was overturned, and a period of confused and cruel government followed, lasting about one thousand years, called the Middle, or Dark, Ages. After this the modern nations of Europe were gradually built up, the most prosperous, energetic, and enlightened of which is Great Britain and Ireland, our mother country.

While these changes were going on in Europe the countries of Asia ceased to advance. The civilization of all of them, with, perhaps, the single exception of Japan, is to-day not much higher than it was three or four thousand years ago.



FIG. 202—A Native Home in India

The people of Europe and southern Asia are, generally speaking, of the White Race, and those of eastern and northern Asia, of the Yellow Race.

Central Europe, India, and China are the parts of this continent that are the most thickly populated? Why are there so many in each of these localities? Why are there so few in northern Asia, and in central Asia?

The total population of Eurasia is about twelve hundred millions, and of this number Europe has about three hundred and seventy-five millions.

Subdivisions. Examine the colored map of Eurasia and name the largest country in the continent. In what two great river slopes is nearly all of this country? Its capital is in European Russia on the River Neva. What is



FIG. 203 Shops and Traders, Seoul, Korea

it? This city was founded by, and named after, Peter the Great, the *czar* or emperor of the country who lived two hundred years ago.

What is the name of the large empire in the eastern part of Asia? It is only a little larger than Canada, but its population is nearly *eighty* times as

great. Name and locate its capital. It is a vast city containing nearly a million of people.

Reference has already been made to Japan. Where is it? It is probably the strongest, and is certainly the most progressive, empire of Asia. What is its capital?

Korea is a small independent state, on the mainland near Japan? What is the capital (Fig. 203)?

In the Indo-China peninsula is a group of small states. Upper and Lower Burma and the Straits Settlements are British colonies, and the eastern part of the peninsula is French. Siam is an independent kingdom. What is its capital?

Name the large country south of the Himalayas. This is the most valued possession of the British crown, partly because of its very large population (nearly three hundred millions), and partly because of the great trade which the British have carried on with it for three hundred years.

Name and locate its capital. It is one of the largest and finest cities of Asia.

What are the two small states bordering on India at the north-west? A narrow projection of Afghanistan at its north-east corner separates the Russian Pamir from India. The people of both countries are divided into tribes. The ruler of the Afghans is known as the *ameer*. What is



FIG. 204—An Arab Camp

the capital of Afghanistan? The ruler of the tribes of Baluchistan is called the *khan*, and is subject to the British Government in India. Name the capital of Baluchistan.

Name the country at the south of the Caspian Sea. This is all that remains of a powerful empire of more than two thousand years ago, which occupied all of western Asia and north-eastern Africa. It is governed by an absolute ruler called the *shah*. What is the capital?

Arabia is a desert country, and has no settled government. The Arabs are generally wandering herdsmen

(Fig. 203), each tribe ruled by a chief called a *sheik*. Oman, in the south-east, is an Arab state, over which is an absolute ruler, called a *sultan*, living in Muscat.

What is the most westerly empire in Asia? It extends into Europe, and the capital is in European territory. Name and locate the capital. The emperor of this country is known as the *sultan*.

There are six states commonly known as the "Great Powers of Europe," because of their great strength, wealth, and influence.

They are:

- i. The United Kingdom of Great Britain and Ireland.
- ii. France.
- iii. Germany, or the German Empire.
- iv. Austria-Hungary.
- v. Russia (including more than one-third of Asia).
- vi. Italy.

Name and locate the capital of each of these countries.

The remaining countries of Europe are as follows:

- | | |
|---------------------|---|
| vii. Norway. | xv. The Danubian States. |
| viii. Sweden. | (a) Roumania. |
| ix. Denmark | (b) Servia. |
| x. The Netherlands. | (c) Bulgaria and Eastern Roumelia
(tributary to Turkey). |
| xi. Belgium. | (d) Montenegro. |
| xii. Switzerland. | xvi. Turkey (extending into Asia). |
| xiii. Spain. | xvii. Greece. |
| xiv. Portugal. | |

Find all these countries on the map, and name and locate the capital of each. Use the colored map of Europe when studying the location of European countries.

Draw a map of Eurasia and mark on it each country and capital.



Fig. 205

THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND

Situation and Outline. Find on the map of Europe the British Isles. In what direction are they from the continent? What countries are they near? What are the boundary waters? Which is farther north, the British Isles, or the Province in which you live?

The British Isles consist of two large islands and very many smaller ones—about 5,000 in all. What are the names of the two large islands? Name the three subdivisions of Great Britain? At one time these subdivisions, and Ire-

land also, were separate independent states, but afterwards they became united into one nation. So the whole group of islands is called the United Kingdom of Great Britain and Ireland.

The area of these islands is slightly more than half that of the Province of On-

tario. No part of either island is more than seventy miles from the sea, and the narrowest part of Great Britain is only about twenty-five miles across.



FIG. 206—Balmoral Castle, Scotland

Scotland, Wales, and the north and west of England are mountainous. Ireland is a plain surrounded by a few ranges of hills, the highest of which are along the south-west coast. Name the chief mountains or hills of both islands.

Where are the coast-lines most irregular—in the mountainous or in the more level parts? Name the principal bays, river-mouths, straits and channels, capes, and islands or island groups.

In Scotland north of the Firth of Clyde the country is very mountainous, and is called the Highlands. The southern part is less mountainous, and is called the Lowlands.

Climate and Drainage. The prevailing winds over the British Isles are from the ocean, generally from the west. Can you explain why? They are temperate winds, having passed over the warm waters of the Atlantic and of the Gulf Stream, so they make the climate mild like that of southern Ontario. A great variety of fruits ripen even at high altitudes, out-door work can be carried on at all seasons of the year, and the harbors do not freeze over so as to interrupt trade. The winds also carry much moisture, so that the rainfall is heavy, especially in Ireland where the grass is kept green the whole year round. In the north of Scotland snow falls in considerable quantities during the winter, but in England and Ireland there is very little.

Nearly all the large rivers of Great Britain flow towards the east, while those of Ireland empty through all the coasts. Explain why. Only two rivers of Great Britain which flow westwards are useful in commerce—the Severn and the Clyde. Find on the map and name the chief rivers in both islands. The Thames is the most important river, commercially, in the United Kingdom, and the Shannon is the largest.

The lakes of the British Isles, such as Loch Lomond in Scotland, Windermere in northern England, and Killarney (Fig. 207), in south-western Ireland, are famous for their beautiful scenery. Lough Neagh in north-eastern Ireland is the largest lake in the islands.

The People.

The population of the British Isles in 1901 was nearly 42 millions (England and Wales $32\frac{1}{2}$ millions, Scotland $4\frac{1}{2}$ millions, Ireland



FIG. 207.—On the Upper Lakes. Killarney, Ireland



FIG. 208.—The Round Tower (110 ft. high) in the ancient cemetery of Glendalough, Ireland

$4\frac{1}{2}$ millions, and the smaller islands less than half a million). England has an average of 558 people to the square mile, the only European country with a greater proportion being Belgium with 588.

The majority of the people are engaged in manufacturing, chiefly cotton, woollen, and iron goods, and in

mining coal and iron, although the farming community also is large. A straight line joining the mouths of the Severn and the Humber divides England into the manufacturing and mining district in the west and north, and the agricultural district in the east and south. The chief industries in the order of their importance are manufacturing, mining, agriculture, commerce, and fishing.

In England and Scotland much attention is given to



FIG. 209 At Oxford University

education by public, private, and grammar schools and universities, but in Ireland primary education is comparatively backward. The largest universities are Oxford (Fig. 209), and Cambridge in England, comprising many colleges, but those of Glasgow, Edinburgh, and Aberdeen in

Scotland, and Dublin in Ireland, are also splendidly equipped and well attended.

The majority of the people of England belong to the Episcopal Church, which is established by law. In Scotland the established Church is Presbyterian. In Ireland there is no established Church, but the greater number of the people are Roman Catholics.

Mining. The development and progress of Britain have been largely due to the wonderful extent of the coal and

iron mines. The coal regions are chiefly in Wales, the north of England, and southern part of Scotland, and the yield is more than half that of all other countries of the world put together.

Much iron is obtained in the coal-bearing districts. There are large deposits also in Ireland, but they are neglected because of the scarcity of coal.

Tin and copper are mined in south-western England, and a very fine variety of granite in north-eastern Scotland (near the towns of Aberdeen and Peterhead).

The chief fuel among the common people of Ireland is peat, or turf, obtained from the bogs, which extend across the centre of that island. It consists of black mud in which is embedded moss, rushes, and half-decayed branches, leaves, and even trunks of trees. In places it reaches a depth of fifty feet, and covers about one-seventh of the island. It is cut out in blocks by shovels, placed on the bank to dry, and afterward burned in the homes of the people.

Manufactures. At the head of British manufactures stands that of COTTON. Raw cotton is imported from the United States, Egypt, India, Brazil, and other countries, and is first spun into yarn and afterwards made into cloth or thread.

In England the cotton manufacture is almost entirely confined to the Lancashire coal-field district. The city of Manchester has the most extensive factories in the world, and all the other large towns near it are actively engaged in the same industry. Liverpool and Manchester are the chief seaports of the district.

In Scotland the cotton manufacturing district is on the Clyde valley coal-field. Glasgow is the chief centre.

The IRON manufacture is second in importance in the British Isles. In addition to the great quantities of ore

taken from British mines much is imported from Spain, Sweden, and other countries, the ports of Swansea and Cardiff in Wales receiving one-third of the total imports. Smelting (that is, extracting the pure metal from the ore) is an important branch of the industry, and the manufacture of iron and steel goods is carried on in many of the cities of England and Scotland, particularly in Birmingham, Sheffield, and Glasgow.

The WOOLLEN manufacture is third in extent. A little wool comes from the highlands of Scotland and the hilly districts of England, but most of it is imported from Australia and South Africa. The city of Leeds is to the woollen industry what Manchester is to the cotton, but many towns throughout northern and central England and southern Scotland have a large trade.

Derby in central England is noted for its *silk* manufactures, Leeds and other midland towns for *leather goods*, and Belfast in Ireland for *linen*. In Staffordshire, near the Welsh boundary, is the district called the "Potteries" because of its extensive manufactures of *earthenware* and *fine porcelain*. The crown Derby china is the most expensive earthenware made in England.

Agriculture. The chief agricultural region of the British Isles is south-eastern England. Oats, barley, and wheat are raised in large quantities, also the ordinary fruits grown in Canada, such as apples, pears, cherries, plums, and garden berries. The potato in Ireland is an important crop.

Much of the cultivated land of both islands is grass land, either for hay or permanent pasture, which is rendered particularly nourishing to cattle by the salty moisture brought by the prevailing westerly winds. The sheep and cattle of the highlands of Scotland, the horses, sheep, and

cattle of the lowlands of Scotland and England, and the cattle of Ireland are supported by these grass lands.

Fisheries.

Fishing is carried on along the east and south coasts of Great Britain (Fig. 210), and along the western coasts of Ireland. The "banks," or shallow places, in the North Sea are valuable fishing grounds. The town of Grimsby, in England, boasts itself the metropolis of the fishing world because so many of its boats and men are engaged in that work.



FIG. 210 Unloading and Cleaning Herrings
Wick, Scotland

The town of Grimsby, in England, boasts itself the metropolis of the fishing world because so many of its boats and men are engaged in that work.

The number of men employed in British fisheries is about 104,000.

At least four methods of catching fish are employed, namely, by trawling, the drift net, the seine, and line fishing.

The trawl is a long bag dragged, with wide open mouth in front, after a sailing or steam vessel for several hours at a time. It takes the flat fish swimming in deep waters, such as sole, plaice, turbot, halibut, flounder, and skate.

The drift net is a curtain-like net suspended in the water and extending sometimes for nearly two miles, in which surface fish, such as herring, mackerel, sprat, and smelt, enmesh themselves. The herring fishery is carried on chiefly at night and usually within thirty miles of the shore.

The seine is also a curtain net, but it is drawn into a circle by boats or a semicircle when worked from shore, and fish are enclosed by it, but not caught in its meshes. Mackerel, herring, and sprat are obtained in this way.

Line fishing is employed mainly for cod, haddock, and ling. As many as 5,000 hooks baited with mussels, whelks, or small fish, are sometimes suspended from lines, at times attaining a length of six miles. The cod

fish thus caught are often kept alive in large floating chests or crates until they reach the market.

Commerce. The trade of the United Kingdom is much greater than that of any other nation in the world.

It is promoted by excellent roads, thousands of miles of canals and railways, and many navigable rivers. The mouths of rivers and numerous bays and inlets along the coast afford excellent harbors.

The great seaports of the United Kingdom are as follows :

- i. *On the east coast of England*—London, Newcastle, Hull.
- ii. *On the south coast of England*—Southampton, Plymouth.
- iii. *On the west coast of England and Wales*—Cardiff, Liverpool.
- iv. *In Scotland*—Glasgow. v. *In Ireland*—Belfast.



FIG. 211—The Great Forth Bridge, Scotland

The chief articles imported are food-stuffs and raw material for manufacturing. The chief exports consist of manufactured goods of various kinds, and minerals of which coal is the principal.

The merchant fleet of the British Isles consists of more than 20,000 vessels manned by a quarter of a million seamen. In addition there are thousands of men employed as "long-shoremen" or wharf

laborers, rescue men in the National Life Boat Institution, light-house keepers, and in many other ways.

The mileage of railways is over 22,000, of which England and Wales have over 15,000, Scotland over 3,500 (Fig. 211), and Ireland more than 3,200. The mileage of canals is about 4,000, of which England and Wales have nearly 3,200, Ireland nearly 600, and Scotland over 150.

The countries of the world conducting the greatest commerce are: (i) Great Britain and Ireland; (ii) Germany; (iii) United States of America; (iv) France; (v) the Netherlands.

Cities and Towns. The United Kingdom, according to the census of 1901, had thirteen cities and towns whose population exceeded 250,000 each, and twenty-six others with 100,000 to 250,000. In England about 77 people out of every hundred were living in the cities and towns, in Scotland about 80, and in Ireland about 35.

LONDON is the capital of the United Kingdom. It is a very old city, having been in existence when Julius Cæsar invaded Britain nearly two thousand years ago. Since that time it has grown to be the largest city and the greatest seaport in the world. The population of "Greater London" is now approaching seven millions.

Its situation at the head of ocean navigation of the Thames and a considerable distance inland has given it a very large im-



FIG. 212—Cheapside, the world's commercial centre, London, England

port trade, and made it a busy distributing point for all nations (Fig. 212). It is also a general manufacturing centre.

The finest buildings in the city are the Houses of Parliament, erected (1840-1867), at a cost of about £3,000,000 (Fig. 213). The oldest one is the Tower, once a fortification, now a museum of military and national relics. Others are the two royal palaces (Buckingham, and St. James'), the Bank of England, the Royal Exchange, the British Museum,



FIG. 213—House of Parliament, London, England

the National Gallery, the Mansion House (residence of the Lord Mayor), Westminster Abbey, and St. Paul's Cathedral. Many bridges (Fig. 214), cross the river and several tunnels pass under it, and there is a complete system of under-

ground railways. Parks are numerous, one of which, Hyde Park, is a great resort of the wealth and fashion of the city.

Greater London, with the exception of the inner city, was in 1899 divided into 28 boroughs for local government purposes, each with its own mayor and council.

MANCHESTER is the greatest manufacturing town in the world. Of what manufacture is it the centre? It has also machine and chemical works which employ thousands of workmen. With its large suburb *Salford* it is the second city in the kingdom, and the population within twelve



FIG. 214—The Tower Bridge across the Thames, London, England

miles radius from the centre of the city is nearly two millions. It is connected with Liverpool by several railways and by a ship canal (navigable for ocean vessels).

LIVERPOOL is the chief seaport next to London, and with Manchester is the port of the cotton manufacturing district, about a million of tons of raw cotton entering, and of manufactured cotton passing out, through it each year. It has a large trade with America, Australia, and South Africa, and is the chief port for Canadian shipping. It has seven miles of docks, which are built of granite, and so constructed that the rising and falling of the tide does not interfere with the loading or unloading of vessels.

BIRMINGHAM has been the centre of an iron industry for hundreds of years. Its manufactures include steam boilers, locomotives, swords, gun barrels, iron and steel tools of all kinds, screws, nails, bells, pins, and pens. The city

is ornamented with parks, statues, and imposing and costly public and private buildings.

Leeds has great manufactures of woollen, leather, and iron and steel goods. *Sheffield* is especially noted for its manufactures of cutlery.

Newcastle-on-Tyne exports large quantities of coal, and builds ships, machinery, engines, cannon and other heavy iron work. *Hull* carries on a large trade with the Baltic ports, the Mediterranean, and America, and has important ship-building. *Portsmouth* and *Plymouth* have excellent harbors and dockyards, and are noted naval stations. *Southampton* is an important port of call for Atlantic steamships, and *Dover* is the chief point of communication with the continent. *Bristol* is a trade centre in the southwest, and was the port from which John and Sebastian Cabot sailed in 1497.

Cardiff is one of the most important shipping ports in the Kingdom.

Here and at *Swansea* are immense smelting works; iron and coal form the great exports.

GLASGOW, on the Clyde River, is the greatest seaport of Scotland. It possesses an important trade with America, and is a terminal point for several lines of Canadian steamships. The iron



FIG. 215—Edinburgh Castle

ship-building of the Clyde is of world-wide fame. Glasgow has a celebrated University.

Edinburgh became the capital of Scotland in 1437, but since 1603 no kings have resided, and since 1707 no parliament has assembled, there. It has two buildings of historic interest—

the Castle, which still contains the ancient regalia of Scotland (Fig. 215), and Holyrood Palace, once the home of the beautiful and unfortunate Mary, Queen of Scots. The seaport of the city is *Leith*. *Dundee* has large linen manufactures, and *Aberdeen* a noted University.

Dublin, the capital of Ireland, is a well-built city, and has considerable trade with other ports in the United Kingdom (Fig. 216). It is the seat of Trinity University. *Belfast* is the chief commercial and manufacturing city of Ireland. Its leading industries are linen manufactures and shipbuilding.



FIG. 216—Sackville Street, Dublin, Ireland

BRITISH POSSESSIONS IN EUROPE

THE ISLE OF MAN in the northern Irish Sea has never lost its independent government. It has a Governor and a Parliament of two houses. The people are engaged in farming, pasturing, and fishing, and number about 56,000. The native language is called Manx, but English is spoken by nearly all. The capital is *Douglas*.

THE CHANNEL ISLANDS form a group in the English Channel near the coast of France, and have a population of about 96,000. The three largest islands are Jersey, Guernsey, and Alderney. Nearly all the people are farmers, and the climate is so mild that vegetation is several weeks earlier than in England. The cattle of these islands are well known. Each island has its own separate government; the island of Jersey has its own lieutenant-governor, but the others have one lieutenant-governor in common. The language of the people is an old form of French. *St. Helier* in Jersey, and *St. Pierre* in Guernsey are the chief towns.

GIBRALTAR. The strongest citadel in the world is the Rock of Gibraltar (Fig. 217), which commands the entrance to the Mediterranean Sea. It forms part of a small peninsula extending southward from the southern coast of Spain. The town, which is walled, is situated on the north-western slope of the rock. It is a crown colony, and the government is in the hands of the general in command of the garrison.

The rock is so perpendicular on the north and east as to be inaccessible, and in one place it reaches a height of 1,439 feet. On the west and south it is more sloping, and is to some extent covered with verdure and flowers, both wild and cultivated. There are a number of natural caverns in the interior of the rock, and to these many artificial ones have been added. The whole peninsula bristles with guns, about six hundred being

inside the rock, and probably four hundred more at various points outside—many of the latter screened behind some of the most charming flower gardens.

The isthmus at the north has two rows of sentry boxes running across it—the British and the Spanish lines—the space between being called the “Neutral Ground.”

The place was taken from the Spaniards in 1704, and although it has since been several times besieged with all the force and strategy that man could devise (notably in 1779-82), the Union Jack has, without any intermission, continued to float over its fortifications.

THE MALTESE ISLANDS. Locate these islands. Compare their distance from Gibraltar with that from the Suez Canal. They consist of three islands, the largest and most important being Malta.

The people are a fine vigorous race, with black hair and eyes, and brown complexion. They are gay, sociable, and industrious,

speaking their own language, and have an excellent educational system. Their principal occupations are farming and shipping, and many are engaged in the manufacture of lace. The chief crops raised are maize, cotton, early potatoes, melons, grapes, and oranges.

These islands were held for nearly 250 years (1550-1798) by the Knights of St. John, a military and religious order in Europe. They became British in 1800, and are



FIG. 217—The Rock of Gibraltar, which guards the entrance to the Mediterranean

of great importance as the British naval station for the Mediterranean, and as a port of call for vessels on the way to India.

The capital is *Valetta*, a strongly fortified city on a small but safe harbor. Its buildings are mostly of stone, and the streets, which in many places are mere stairways, are paved, clean, and attractive with flower stands and gardens. The church of St. John is more than three hundred years old, and is richly decorated with historical and costly ornaments. The old armory of the Knights of St. John has many a rusty sword that was once used in the Crusades and other wars hundreds of years ago.

OTHER COUNTRIES OF EUROPE

Norway and Sweden. Which is the larger of these two countries? The whole peninsula (known as the Scandinavian peninsula) is very mountainous, especially on its western side, and the coast of Norway is high and rocky, indented by many *fiords* and bordered by many islands. The climate is bracing and healthful with cold winters and warm summers even on the northern coasts. The warm waters of the Gulf Stream and the consequent temperate ocean winds make the weather much milder than we should expect in a country so far north. Account for the heavy rainfall on the western coasts of Norway. Why do the harbors on the Atlantic and Arctic oceans not freeze during the winter while those on the Baltic do? In north-



FIG. 219 — A Lapp Child on Reindeer

ern Norway the sun does not set from the middle of May to the end of July, and does not appear above the horizon during December and January. Show by means of the school globe how this is possible.

The people of both countries are intelligent, educated, industrious, and hospitable. The Laplanders (Fig. 219) in the north, however, are uncleanly and ignorant, and



FIG. 220.—Milking Goats, Western Norway

depend upon the reindeer and fishing for nearly all their wants—food, clothing, drawing loads, etc. The two countries were formerly under the same king, but now each has its own government. The religion of nearly all the people is the Lutheran Protestant. From very early times the Northmen, or

people of this peninsula, were daring navigators. What features of the country encouraged this kind of life? They are said to have explored the eastern coasts of North America five hundred years before the time of Columbus.

Agriculture is carried on in southern Sweden, where ordinary grains and potatoes are successfully raised. In Norway cattle, sheep, and goats yield dairy produce and wool (Fig. 220). More than one-third of the peninsula is covered with forest, and much timber and wood-pulp are exported. Mining of iron, copper, and silver is an important industry. The fisheries of the North Sea are valuable, and

sea-birds' eggs and eider down are gathered in the fiords. There are important manufactures of iron and steel, and Swedish iron is regarded the best in the world. Shipbuilding is largely carried on, and Norwegian vessels may be seen in the harbors of nearly every country.



FIG. 221—Stockholm, Sweden

The exports are the products of the forest, the mine, the dairy, and the fisheries, and the imports woollens, grain, and coal. The Gotha Canal across southern Sweden greatly assists trade.

All the large cities of both countries are seaports. Why should there be so few inland towns? STOCKHOLM, capital of Sweden, is beautifully situated at the entrance of Lake Malar (Fig. 221), and *Göteborg* is the chief commercial city of that country. CHRISTIANIA is the capital of Norway. *Bergen* and *Trondhjem* export timber and fish. *Hammerfest* is the most northerly town in Europe.

Denmark. Name the peninsula and the large islands which make up this country. The land is flat everywhere—there are not even any large hills—and the soil in the islands is more fertile than that on the mainland. The people are intelligent and industrious. Their chief occupa-

tions are farming, stock-raising, dairying, and fishing (Fig. 222), and from the exports of farm and dairy produce Denmark obtains much of her wealth. The growing of beets and the manufacture of beet sugar are rapidly increasing industries, and Denmark is a rival of Canada in the British butter markets. The chief trade is with Great Britain and Germany.



FIG. 222—A Danish Fish Girl

The Danes, like the people of Norway and Sweden, have long been noted seamen, and to-day their maritime enterprise is indicated by their possession of such colonies as the Faroe Islands, Iceland, the south-western shores of Greenland, and a few islands in the West Indies. At one time they gave great trouble to Alfred the Great and other kings of England, and afterwards their princes actually held the English crown for twenty-five years. Queen Alexandra of Great Britain is a daughter of the venerable King of Denmark.

The capital and chief trade centre is COPENHAGEN, on the island of Seeland, the only large city (Fig. 223).

Belgium and the Netherlands. Locate these two countries. In south-eastern Belgium the land is elevated and somewhat mountainous, but near the coast it is low and flat. About one-third of the Netherlands is below the

level of the ocean, and the waters are kept out by great dykes, or embankments of stone and earth, and by dunes, or hills of sand, formed by winds from the sea on the sandy shore. What large river flows through the Netherlands? Belgium is the most densely populated country in Europe, having 588 people to the



FIG. 223—Copenhagen, Denmark



FIG. 224—A family group of Belgians



FIG. 225—Neighbors big and little in a village in the Netherlands

people speak their own language; the greater number of the Belgians speak French, though Flemish is the language of the people in the west, and in the east some use German.

Agriculture is an important industry, and though farms are small they are well improved. In the lowlands canals run in all directions—in many cases lying between high embankments and forming the “fences” between the farms. The land thus enclosed sometimes becomes covered with water from rains or other sources, and this is pumped by windmills or by steam pumps into the canals. In the Netherlands there are thousands of windmills (Fig. 226), and they are also used to grind corn and wheat, scutch flax, saw wood, and break stones. In a dry season water may also be allowed to flow from the canals

square mile. Its people are cultured and industrious, and are nearly all Roman Catholics (Fig. 224). The Dutch, or people of the Netherlands, are sturdy and independent (Fig. 225), and the women are noted for the neatness and cleanliness of their housekeeping. The majority of the Dutch are Protestants. The Dutch

over the land, and more than once in their history the Dutch have driven out foreign foes by opening the sluices and inundating the country. The principal farm products are oats, rye, wheat, potatoes, and sugar-beets, and in addition in the Netherlands flax, cattle, butter, and cheese, the latter including



FIG. 226 Huge Windmills on the banks of a canal, Netherlands

the well-known Limburger cheese (named from the province of Limburg).

But these small countries have many more people than the farms will support, so other industries must be carried on. One of these is manufacturing. Belgium is rich in coal and iron, and its iron manufactures are therefore very great. The city of *Brussels* has manufactures of steam engines and railway supplies, and also cottons, woollens, glass, carpets, and lace. Some varieties of its lace have sold for \$350 a yard. *Ghent*, a city built on twenty-six islands joined by nearly 300 bridges, has manufactures similar to those of Brussels. *Liege* is an important manufacturing town in the coal and iron district.

Another industry is shipping. For many centuries the Dutch have been sailors, opening up colonies in various parts of the world with which to trade, carrying goods from one foreign country to another, importing goods into their



FIG. 227 A busy street in Antwerp, Belgium

own country, and exporting the products of their manufactures. They have many large and flourishing colonies in the East Indies, among which are Java, Sumatra, Celebes, and parts of Borneo and New Guinea. Name one they have in South America. They were the first to colonize what is

now the city of New York. Among the imports are wheat, flour, and other foods, and raw supplies for the factories—cotton, wool, flax, and hemp—and although the coal mines are rich, large quantities of coal are imported from Great Britain. The principal seaports are *Rotterdam* and *Amsterdam* in the Netherlands, and *Antwerp* (Fig. 227) in Belgium, and these are all large and busy cities. The internal trade is conducted on excellent roads, many railways, and the canals,—the last named forming a highway for boats and barges in the summer, and for thousands of people in sledges or on skates for three months in the winter.

The capital of Belgium is BRUSSELS, a large city famed for its splendid buildings, and of the Netherlands THE HAGUE, a handsome city of about the same size as Toronto. Belgium is often called the “battlefield of Europe” because of the many wars that have been carried on in it. Among

them were campaigns by the British leaders William of Orange, Marlborough, and Wellington, and perhaps the most famous battlefield is that of *Waterloo* near Brussels.

France. Locate this country and state its boundaries. It is slightly smaller than the Province of Ontario. In what part of it is the great European highland? Compare in size its Atlantic and Mediterranean slopes. Name the rivers of these slopes. The weather in general is warmer than in England. State any reasons why.

The population is nearly 39 millions, and the people are polite and gay, and have good taste in art and literature. The majority are Roman Catholics, all religions are tolerated, and the system of education is efficient. The country is a republic, with a President who is appointed by the combined vote of the Chamber of Deputies (House of Commons) and the Senate. The Army is maintained by "conscription," and numbers more than half a million men under arms. The Navy is second in strength to that of Great Britain. The cities of *Brest* and *Cherbourg* in the north-west, *Bayonne* in the south-west, and *Toulon* in the south-east, are strongly fortified military and naval stations.

Many of the people are engaged in agriculture (Fig. 229). Grapes, wheat and other grains, tobacco, hemp,



FIG. 229 A Brittany Boy

flax, sugar-beets, and mulberry trees (on the leaves of which the silk-worm feeds) are the chief crops. The cities of the south-west, such as *Bordeaux*, *Toulouse*, and *Dijon* are famed for their wines; and "champagne" wine comes from *Rheims* and other towns in the north-east.

Two large coal-fields, one in the north-east, and the other in the Rhone valley, and iron mines in the same localities, give rise to important industries. In nearly all the towns on the northern coal-field there are manufactures of woollens, cottons, and linens. *Lille* is noted for its linens and woollens, and *Valenciennes* for its lace. The southern coal-field district has large manufactures of silks and machinery. *Lyon*, the second city in France, has the finest silk manufactures in the world, and *St. Etienne* is the great iron and steel manufacturing city of the republic.

The raw materials for these manufactures make up the chief imports of the country, and the products of the same and wines are the chief exports. The chief seaports are—in the north *Havre* (Fig. 230), with important American

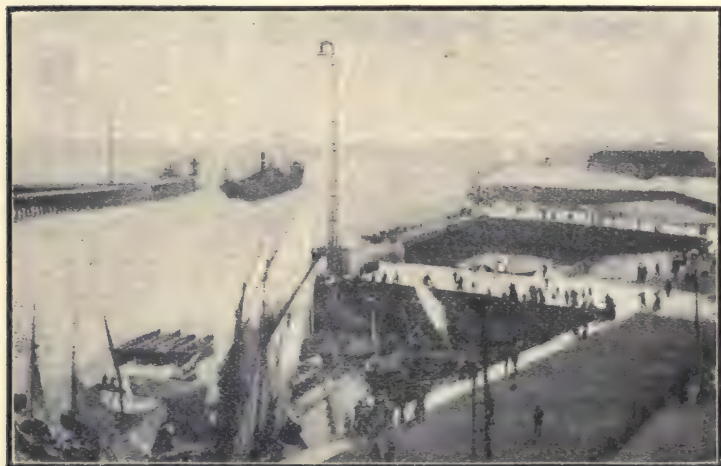


FIG. 230—Entrance to the Port of Havre, France

trade, and *Rouen*; in the west *Bordeaux*; and in the south *Marseille*, nearly 2,700 years old, with a large trade with the east through the Suez Canal. Railways are numerous, and many canals afford complete waterways from the Atlantic to the Mediterranean.

The city of **PARIS**, the capital, is the second city

in Europe and the third in the world in size, and is said to be the first in the world in beauty. It has magnificent parks, picture galleries, and public buildings, and is a centre of fashion, art, music, and learning. Its many manufactures include those of jewellery, gloves, fancy boots and shoes, perfumery, and porcelain.

Many of the towns of France are noted historically. Search for items of interest in the histories of *Rheims*, *Amiens*, *Calais*, *Nantes*, and *Orleans*.

Spain and Portugal. The Spanish peninsula, or, as it is sometimes called, the Iberian peninsula, is a plateau with several mountain ridges running parallel with each other east and west (Fig. 231), and large rivers draining the valleys so formed. Name the chief rivers.

There were settlements in this peninsula as early as 2500 years ago, and during its history it has been



FIG. 231—Mountain of solid Limestone, Southern Spain

occupied successively by Phoenicians, Romans, and Moors. There are many old Moorish cities in Spain. *Granada* is specially noted for the Alhambra, a Moorish palace of great size and wealth (Fig. 232). *Cordova* was the old Moorish capital. *Seville* has an elegant and famous Moorish palace, the Alcazar. Four hundred years ago Spain was the wealthiest and most powerful country of Europe, and



FIG. 232 — Walls and Towers of the Alhambra, Granada, Spain

Portugal was an important commercial state. One hundred years ago many of the towns of both countries became noted in the wars against Napoleon.

The wealthier Spaniards are gay, proud, and quick-tempered, and the poorer people uneducated and lazy. The national amusement is bull-fighting.

The soil is fertile in the valleys, and the ordinary grains, grapes, oranges, olives, lemons, and figs are grown; but methods of farming are very rude, and crops are smaller than they should be. Silkworms are raised, merino sheep are pastured on the mountain-sides for their fine wool, and forests of oak are grown, from the bark of which cork is cut. Limited quantities of wine, ironware, cottons, silks, and cork are made. The raisins and grapes of

Valencia and *Malaga* are well known. The mountains are rich in minerals. Copper, lead, and iron are obtained in large quantities, and quicksilver is more abundant there than anywhere else in the world.

The chief Spanish seaport is *Barcelona*, and the second *Cadiz*. Near *Cadiz* is *Palos* whence Christopher Columbus set sail for the west in 1492. Portugal has two very busy seaports, LISBON the capital, and *Oporto*, which gave its name to "port" wine made there from the grapes of the Douro valley.

The capital of Spain is the large city of MADRID. About thirty-five miles from this city is the celebrated Palace of the Escorial, built about 350 years ago.

Germany. Locate the German Empire and name its boundaries. It is of about the same size as France. In the south it is mountainous, and the northern part is on the great European plain. All its large rivers, except one in the south, flow northwards from the mountains. Name them.

The Rhine is the chief river of Germany. It rises in the glaciers of the Alps, flows through the fertile and carefully cultivated vineyards of western Germany, and enters the North Sea through the Netherlands. It is noted for its varied scenery, its tower-crowned heights, its numerous small tributaries, and the many rich and populous cities in its basin.

In 1900 Germany contained nearly 56½ millions of people. About three-fifths are Protestants and the remainder Roman Catholics. The educational system is regarded as one of the finest in the world, and there are famous universities in the cities of *Berlin*, *Munich*, *Leipzig*, *Bonn*, *Breslau*, *Halle*, *Heidelberg*, and many other places. Special attention is given to the military training of boys and young men, so that often women and girls have to do the work in the fields, as in France and some other countries of Europe. The study of music receives great attention in that country. The cities of *Berlin*, *Stuttgart*,



FIG. 233—Dresden, and the Elbe River, Germany

and *Leipzig* are book-publishing centres. *Dresden* (Fig. 233), in Saxony, has splendid palaces, parks, and gardens, and many treasures of art such as collections of fine porcelain, precious stones, and paintings. *Munich*, in Bavaria, has a celebrated art gallery.

The empire is made up of a col-

lection of states, each with its own ruler, under the central government at Berlin. The largest and most important of these states is Prussia, and the King of Prussia is the *Kaiser*, or Emperor of Germany. BERLIN, the imperial capital, is a splendidly built city, with many parks, wide streets, and magnificent palaces and public buildings (Fig. 234). The German army is said to be the finest in Europe, and is about as large as that of France. Many of the cities are fortified. *Magdeburg* (Fig. 235) is defended by one of the strongest fortresses in Europe, and *Kiel*, *Stettin*, *Danzig*, and *Königsberg* are fortified naval stations.

The soil is excellent everywhere, and the chief industry of the people is agriculture. All the ordinary grains are grown, the first in importance being rye, much of which is made into bread. Sugar-beets are largely cultivated, and sugar is one of the important articles of export. There are also hundreds of thousands of acres of vine-

yards and hop-yards, from the products of which wine and beer are manufactured.

Rich coal and iron mines extend along the western and south-eastern borders; the output of the zinc mines is greater than that of any other country; copper is found in the mountains, and amber on the

shores of the Baltic. The chief manufacturing industries are in the coal-producing districts. The principal articles made are iron and steel goods, cottons, woollens, and silks,

and in smaller amounts sugar, glass, porcelain, clocks, wine and beer, chemicals, pianos, and scientific instruments. At *Essen*, in the north-west, the celebrated Krupp guns are made. *Breslau* is the most import-



FIG. 234—Memorial Church, Berlin, Germany



FIG. 235 Ancient Magdeburg on the Elbe River, Germany

ant city in eastern Germany; it has great iron manufactures, and its wool fairs are celebrated all over the continent. *Cologne* and *Strassburg* are large manufacturing cities and have famous cathedrals.

The imports include grain, flour, wool, cotton, and silk, and the exports the products of the manufactures. The largest port and chief commercial city of the empire is *Hamburg*, a city nearly three times as large as Montreal. Where is it situated? Other important ports are *Bremen*, *Stettin*, *Lübeck*, and *Königsberg*. Why should these places have large foreign trade? Why should the trade of Hamburg be greater than that of the others? Railways and canals are numerous, and a ship canal connects the North and Baltic Seas. *Frankfort-on-the-Main*, which was once the German capital, is a great banking city.



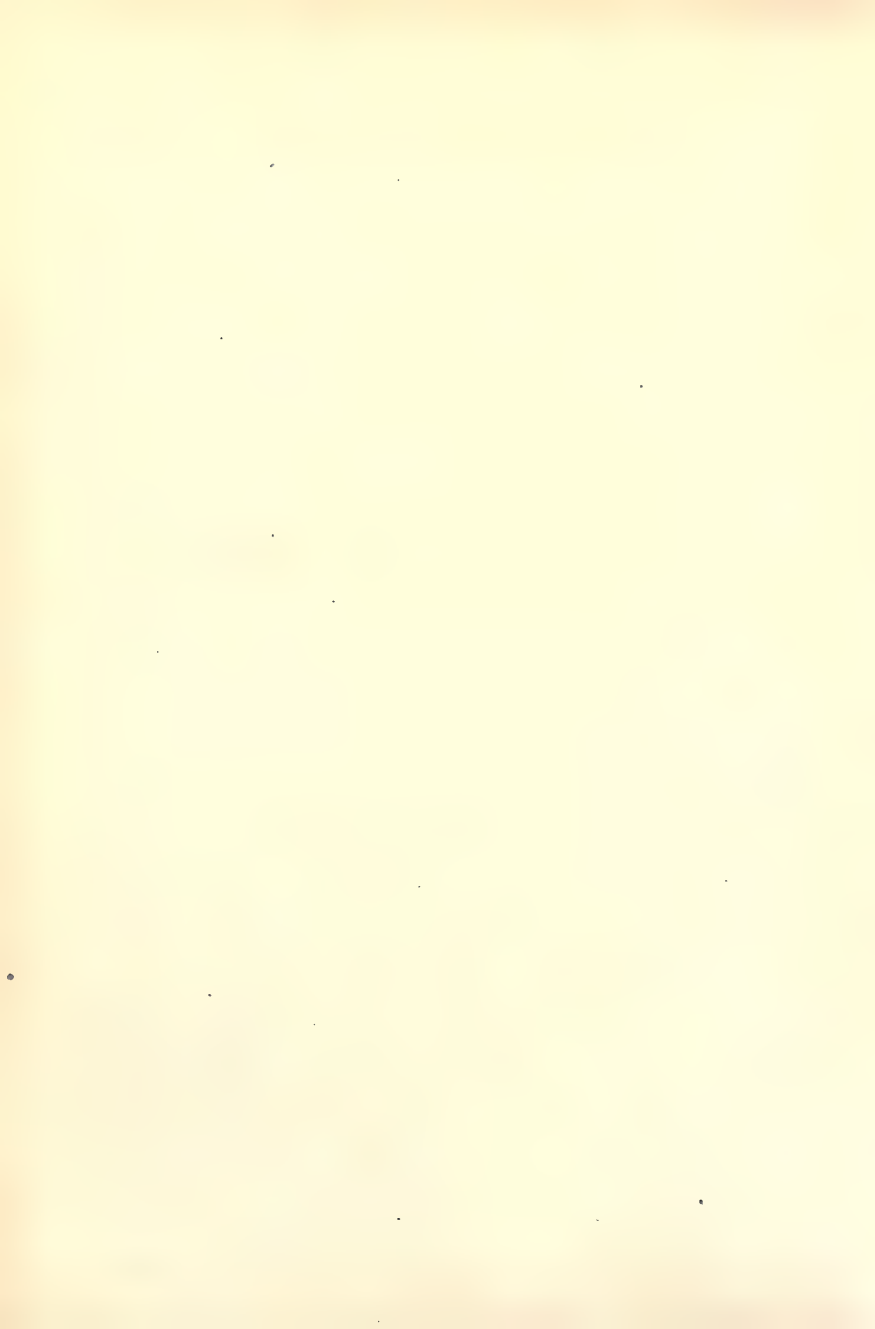
FIG. 236—A Bohemian Gypsy Girl

Austria-Hungary. Describe the boundaries of this Empire. It is a little larger than France or Germany. Is it in the mountainous or the level part of Europe? Name the mountains in the extreme west. Name those in the north-east. What great river drains the central slopes and plains of the country?

The Danube is the second largest river of Europe. Rapids and shallow marshes interfere with navigation in some places, but these have been overcome by canals and by deepening the channel.

The population is a little over 48 millions. Two-thirds of the people are Roman





Catholics. Elementary schools are backward, but higher education is on an excellent footing—there are eleven universities, of which the largest is in Vienna.

The two states, Austria in the west and north and Hungary in the south-east, have separate parliaments, but are united under one sovereign and central government. VIENNA, the largest city, is the capital. The ancient portion of the city contains the imperial palace, the cathedral, the university, and other public buildings. Surrounding it is the modern city, magnificent with parks and imposing buildings. Vienna is a commercial centre with many manufactures. BUDAPEST, capital of Hungary, is formed by the union of the old German town of Buda on the right bank of the Danube with the more modern town of Pesth on the left bank. As it is in the centre of the Hungarian grain district it has many flour mills, and its trade on the Danube is very large.

Agriculture is an important industry. The ordinary grains, sugar-beets, grapes, hops, and timber are the chief products of the soil. Much care is given to the raising of horses, especially in Hungary.

The mineral wealth of the country is great. Coal is widespread in the west, and



FIG. 238—Salzburg, a picturesque town in western Austria



FIG. 239—An Alpine Elevator to the Clouds, Mount Pilatus, Switzerland

iron, silver, and quicksilver are found in nearly all the mountainous districts. The salt mines of the north-east are famous; one of them, near the old Polish city of *Cracow*, is a great underground town with streets, churches, stables, and other apartments cut out of the salt.

The manufactures of the coal-producing region include woollens, linens, cottons, iron, and steel wares, porcelain, sugar, beer, glass, and musical instruments. Besides Vienna and Budapest already mentioned *Prague* and *Brunn* in the north-west have important manufactures.

The foreign commerce is large, but not equal in proportion to that of Germany or France. Where is the sea-coast of this country? *Trieste* is the chief port.

Switzerland. This small republic is very mountainous, especially in the south and east, and is much visited by tourists to view the charming scenery of snow-capped peaks, glaciers, mountain torrents, and mirror-like lakes. What mountains are they (Fig. 239)?



FIG. 240—Swiss Farm House

The people are independent, brave, and simple in habits and tastes. The majority are farmers (Fig. 240), raising hay and ordinary grains, and in the warm valleys great quantities of grapes. Many herd cattle, goats, and sheep on the mountain sides, and dairy products and wool are obtained. Manufactures are promoted by the rapid mountain streams, and the people are very skilful in making silk and cotton goods, embroidery, watches, music boxes, cheese, and wine. The trade is mainly with the bordering countries and Great Britain. What would you consider to be the principal imports and exports?

The chief commercial city is *Geneva*, an old historic place, with palaces, museums, and other splendid public buildings. The largest city is *Zurich*. BERN, the capital, is well built, and has an important trade.

Italy. Locate this country and state its boundaries. What two large islands form part of it? What mountains form its northern boundary? What mountain range extends throughout the peninsula? Between these two ranges in the north is the Plain of Lombardy, one of the most fertile districts in Europe. What river drains this plain? Farther south, on the west side of the Apennines, is another broad plain. What rivers drain it? The southern Apennines are in some places volcanic, the chief volcano being Vesuvius near the city of Naples. Italy is famed for its blue skies, its splendid sunsets, its soft breezes, and its abundant showers.

The population exceeds 32 millions. Much attention is paid to higher education, there being no fewer than twenty-one universities, but elementary education is inefficient. The almost universal religion of the country is Roman Catholic, and the government is by a king and parliament.

The chief industry is agriculture, giving employment to fully one-third of the people. In the plains and low valleys

are raised grapes, lemons, citrons, oranges, and olives, and also wheat and maize. In the delta of the Po are the principal rice fields of Europe. Herding of sheep and goats and dairying are occupations in the mountains.

The production of raw silk is greater in Italy than in any other European country, and this has given rise to great silk manufactures in the cities of *Milan*, *Turin*, *Bologna*, and *Florence*.

Large quantities of sulphur are mined in the volcanic regions. Much sulphur is used to bleach straw to weave into hats, and the cities of *Leghorn* and *Florence* are noted for their hat manufactures.

Other industries are mining of zinc, lead, iron, and marble, gathering coral and sponges, and manufacturing an endless variety of fancy goods.

The trade is with bordering countries, Great Britain, and the United States. Railways are numerous in the north,

and in some parts of the Alps there are railway tunnels nine or ten miles long leading into France and Switzerland. Imports include wheat, coal, and raw cotton, and exports raw silk, olive oil, and wines. The chief seaports are *Genoa*, noted also as the birthplace of Christopher



FIG. 241—The Forum or public meeting place of the ancient city of Pompeii, Italy. The volcano of Vesuvius in the distance.

Columbus, *Leghorn*, and *Naples*, on the west coast.

Italy has had an eventful history. Two thousand years ago it was the centre of the great Roman Empire, and in later centuries many states and cities, particularly *Venice* and *Genoa*, became rich and supreme over Italy and the Mediter-



FIG. 242.—The Rialto, a noted bridge across the Grand Canal, Venice, Italy

anean. The city of *ROME* was founded more than twenty-six centuries ago. The ancient city is south-east of the modern one, and many ruins have been unearthed by excavation. The modern city is handsomely built and contains many churches and priceless treasures of painting and sculpture. On the east side of the Tiber are the Quirinal, or royal palace, and the Houses of Parliament, and on the west side the Vatican, or palace of the Pope, and the splendid St. Peter's Cathedral, the largest religious edifice in the world.

Italy is remarkable for its many handsome cities. *Milan* has a magnificent cathedral of white marble. *Venice* is built on a cluster of islands in the north Adriatic. Many of its streets are canals on which the carriages are light gondolas. It has some historic palaces, cathedrals, and bridges (Fig. 242). *Florence* is one of the most beautiful cities of Europe, and has some famous museums and art



FIG. 243—Cathedral and Leaning Tower, Pisa, Italy

galleries. *Pisa* is noted for its leaning tower (Fig. 243). *Naples*, the largest city in Italy, has some fine buildings and presents an exceedingly handsome appearance from the water. Near *Naples* are the interesting ruins of the old Roman city of *Pompeii*, buried by an eruption of

Mt. Vesuvius more than 1,800 years ago, and recently excavated (Fig. 241).

The Danubian States. These States occupy the fertile lower valley of the Danube, and the mountainous regions of the northern part of what is called the "Balkan Peninsula," from the Balkan Mountains, south of the Danube.

They were formerly under the rule of Turkey, but are now independent of that badly ruled country. The occupations of the people are chiefly agricultural and pastoral. Education is neglected and commercial progress slow.

SERVIA, capital *Belgrade*, and *ROUMANIA*, capital *Bucharest*, are independent kingdoms; *MONTENEGRO* an independent principality; *BOSNIA* and *HERZEGOVINA* are provinces of Turkey, but are controlled and administered by Austria-Hungary; and *BULGARIA*, capital *Sofia*, is a principality under the suzerainty of Turkey.

The Turkish Empire. The Turkish Empire comprises possessions in Europe, Asia, and Africa; in Europe, the country extending from the Strait of Otranto to the Bosphorus; in Asia, Asia Minor, including Palestine (Fig. 244), and parts of Arabia; and in Africa, Egypt and Tripoli.

This Empire is interesting chiefly because of its eventful history. Within its borders great nations of ancient times rose and fell, the Hebrew nation and worship were developed, Christianity was founded by Christ and His apostles, and afterwards Mohammedanism by Mahomet.

But the countries making up this empire have little or no common commercial or national interests, and their histories for the most part have been quite separate. The people nearly everywhere are



FIG. 244—The Garden of Gethsemane and Mount Olives Jerusalem, Palestine

unprogressive, and sunk in ignorance and superstition (Fig. 245). The government of the *Sultan*, or despotic emperor, is notoriously weak, though a strong army is maintained. Turkey is therefore one of the less important powers, and the *Sultan* is often called "the sick man of Europe."

Turkey in Europe, formerly very extensive, is now greatly reduced, but contains, however, the seat of government and residence of the *Sultan*, at Constantinople.



FIG. 245—A Turkish Pedlar

Farming is universal, and maize, wheat, cotton, and tobacco are raised, though the methods of tillage are very rude. Broad fields of roses are cultivated to obtain the perfume "attar of roses" which sometimes sells as high as \$75 or \$100 an ounce. Great beds of poppies, also, are cultivated in many parts of the country. What is made from the latter? Pasturing of cattle, sheep,

and goats gives employment to many people in the mountainous districts.

Manufacturing is of little importance, as much of the work is done by hand. But in some of the large cities carpets, rugs, and rare silk and cotton fabrics are made.

The trade is chiefly with Great Britain and France and is carried on mainly from the Asiatic ports. The chief seaports are *Constantinople* and *Smyrna* in Asia Minor.

CONSTANTINOPLE is the capital of the empire. It was founded more than 2500 years ago, and was formerly called Byzantium. It is built on several hills, and contains

many mosques with glittering spires and minarets, so that from a distance it has a magnificent appearance. But its streets are narrow, crooked, and dirty, the only scavengers being the great numbers of dogs which the city protects. The Golden Horn, a branch of the Bosphorus, forms a splendid natural harbor.

ISLAND OF CRETE OR CANDIA. This large island, south-east of Greece, is nominally under the suzerainty of Turkey, but the government is administered by a High Commissioner, appointed by the great powers of Europe.

Greece. This small kingdom is made up of a mountainous mainland and many islands off both west and east coasts. At one place two gulfs cut it nearly in two, and the isthmus is crossed by a ship canal (Fig. 246).

The country is interesting because of its greatness in ancient times, and numerous landmarks, ruins, and relics are to be seen there. After a very troubled history it became a kingdom under the protection of Great Britain, France, and Russia in 1830. The present king is a brother of our British Queen Alexandra.



FIG. 246 The Ship Canal, Corinth, Greece



FIG. 247 A distant view of the Acropolis at Athens, with the ruins of the Temple of Jupiter in the foreground

There are fertile agricultural lands between the mountains, on which are raised wheat, rye, maize, grapes, olives, and other southern fruits. Much attention is given to the cultivation of a small grape from which currants are prepared, and currants make up nearly half the exports. On the mountain sides sheep are herded, mines of iron and lead are worked, and much marble is quarried. The trade is largely with Great Britain. The Ionian Islands off the west coast and most of the islands off the east coast belong now to Greece.

ATHENS, the capital, is a well-built city. The site of the ancient city (said to have been founded 1500 years before Christ) is south of the modern one. There the most interesting spot is the Acropolis or citadel (Fig. 247). On it was the Parthenon, at first a temple of the goddess Athena and the glory of the ancient city, afterwards in succession a Greek, a Roman, and a Mohammedan temple, and then a powder magazine. After being partially destroyed by an explosion of the powder it contained, many of its ornaments were removed to the British Museum in London, so that it is now a collection of columns

and other ruins, and interesting only because of its memories. *Patras*, on the Gulf of Corinth, exports currants.

The Russian Empire. Locate, and give the boundaries of, this vast empire. It is the second largest in the world, having an area of more than $8\frac{1}{2}$ million square miles. Which part of the continent has the greater part of it, Europe or Asia? Compare its latitude and its heat belts with those of Canada.

The population of the empire is about 130 millions. The people are under the rule of the *Czar*, or emperor, whose



FIG. 248—A Russian School



FIG. 249 —Wheat for export, Odessa, Russia

power is absolute. The religion of the majority of the people is that of the Greek Christian Church, of which the czar is the supreme head.

Russia in Europe. The country between the Baltic and Black Seas is a vast agricultural and manufacturing area and contains the larger part of the people of the

nation. The agricultural products of Russia include wheat, oats, rye, barley, flax, hemp, sugar-beets, grapes, and tobacco. Two thousand years ago the southern part of European Russia was a great grain-field, and it is one of the most productive in the world to-day. What are the *steppes*? What are the occupations of the people of the northern part of the steppes?

There are rich coal and iron mines between the Don and the Dneiper rivers, and in this area there are important manufactures of cottons, woollens, linens, silks, and hardware. The Ural mountains yield much gold, platinum, and copper.

There are valuable fisheries of sturgeon on the Volga, the centre of which is at *Astrakhan* near the mouth of the river.

There is only one important seaport on the northern coast, *Archangel*, with exports of timber, furs, and grain.

Why are the seaports in the north so few? The ports on the Baltic—*St. Petersburg*, *Riga*, and *Helsingfors*—export timber, hemp, and grain. Why these articles? The great agricultural and manufacturing district of the south has its outlet in the Black Sea, and several important commercial cities have grown up there. Name two or three of them. The largest and busiest is *Odessa*. What are probably some of its exports (Fig. 249)?

The rivers are important highways of trade and routes of communication in both European and Asiatic Russia. A railway has been built across the continent connecting the Baltic in the west with the Pacific Ocean in the far east. *St. Petersburg* in the west and *Vladivostock* on the Japan Sea are the terminals. Hundreds of Russian towns have annual "fairs," which are really great markets for the sale of goods, lasting in some cases for several months. The one at *Nijni Novgorod* is the most famous, being of the nature and dimensions of a world's fair.

The city of **ST. PETERSBURG**, founded by Czar Peter the Great in 1703, is the capital. It is a magnificent city with wide streets, parks, island summer residences, palaces, and cathedrals with gilded domes.



FIG. 250—The Great Bell of Moscow, Russia. Its weight is nearly 200 tons. It was broken when being made, and is now used as a kind of chapel.

The entrance to the mouth of the Neva River on which it is situated is guarded by the strong fortress of Cronstadt. *Moscow*, the ancient capital, has many cotton mills, woollen mills, and silk factories. It contains the Kremlin, a walled and strongly fortified enclosure of about one hundred acres, containing cathedrals, palaces, museums, arsenals, and the treasury in which are millions of dollars' worth of crown jewels. The Great Bell of Moscow is the largest in the world (Fig. 250). *Warsaw* was the capital of old Poland. It is a large city and an important trade centre. Near it are *Lodz* with cotton and linen manufactures, and *Kiev* where Christianity was introduced into Russia nearly a thousand years ago, now regarded a sacred city.

The Grand Duchy of Finland, situated on the Gulfs of Finland and Bothnia, forms part of the Russian Empire, but has a government of its own, subject to the Czar. *Helsingfors* is the capital.

Draw an outline map of Europe (Fig. 251) and mark on it all its subdivisions and the capitals of as many of them as possible.



FIG. 251—Outline map of Europe

BRITISH POSSESSIONS IN ASIA

The Indian Empire. Locate and give the boundaries of this country. It is a little more than half as large as Canada, but has nearly *fifty-five* times as many people. What high mountains are in the north? What plateau is in the south-west? Stretching between the mountains and the plateau is a long and broad fertile plain, watered by the Ganges and its tributaries, and inhabited by half the people of India. Burmah, which forms part of the Indo-China peninsula, east of the Bay of Bengal, is mountainous, but some parts of it are thickly settled.

In what heat belts is India? Is the general climate therefore warm or cool? What parts of North America are in the same belts? For about three months each year the heat becomes so oppressive that Europeans or Canadians can hardly endure it. What are monsoons? In the winter, when the wind blows from the north, the weather is cool, and the air is refreshing and healthy. In the summer, when the wind blows from the south, the season is very wet, the heaviest rainfall in the world occurring in north-eastern India. In the north-west, which is not reached by monsoons, there is little or no rain, and in some places the country is desert.

Name the largest rivers of India. The Ganges is the most important, and is regarded as a sacred river by the natives. The Indus gives its name to the country, India, and to the people, Hindus. Why should they be named from this river, rather than from the Ganges? In what direction does the Deccan plateau slope?

In the Ganges valley there are 400 to 800 people to the square mile, and in some parts of it two persons have to live on the production of a single acre. The English-speaking



FIG. 253 - A Hindu

population numbers less than a quarter of a million. Nearly three-fourths of the people are of the Hindu religion (Brahmanism), and of the others the majority are Mohammedans (Fig. 253). Christians number only about two and a quarter millions. The great mass of the people are uneducated; more than 250 millions can neither read nor write (Fig. 254).

India is a collection of states, some of which are under direct British rule, and others under native princes protected by Great Britain. The British have been gradually extending their power there for more than three hundred years. Read the stories of Lord Clive, Warren Hastings, the Black Hole of Calcutta, and Sir Henry Havelock. Our King is styled "Emperor of India," and is rep-



FIG. 254 - A Parsi schoolmaster and his class of boys, Island of Uran, India

resented in India by a Governor-General, but the people do not appoint members to a parliament. There is a large army, the greater part of which is composed of native soldiers called *sepoys*.

India is a farming country. The soil is fertile almost everywhere except in the north-western desert, and the farms are quite small, averaging only about five acres each. In some

parts of the country water is collected during the rainy season in wells and reservoirs, and afterwards used to irrigate the farms. Where in India is wheat raised? Cotton? Tea? Rice and millet are cultivated and provide food for the millions of the poorer people. Vast fields of pop-



FIG. 255 Curiously rigged camel-waggon, Delhi, India

pies are found over the country, and the opium obtained is exported principally to China. The hilly and swampy districts are forest-clad. What are some of the principal trees? What are the *jungles*? Name some wild animals that live in the latter.

The mineral wealth is considerable. Coal and gold are found in the Deccan, copper in the Himalayas, and iron in various parts of the country. Diamonds and other precious stones have also been found in the Deccan,

Indian tradition says that the Koh-i-noor diamond, the largest of the British crown jewels, was found there more than 5,000 years ago.

India was long famous for its manufactures. Cotton and silk goods, made entirely by hand, were exceedingly costly, and were brought to Europe and worn only by the wealthy. In recent years, however, the use of coal and the introduction of machinery have brought about improvement. Spinning and manufacture of cotton is an important industry of the country, silk goods are produced in many of the ancient cities, and shawls made from the wool of the Cashmere goat in the north-west are celebrated.

India carries on an enormous trade, about one-half of the whole being with Great Britain. Though much cotton and silk are manufactured in the country, the raw materials are shipped in large quantities to British factories, and the manufactured goods imported again. Other



FIG. 256 Banyan Tree

exports are rice, wheat, tea, hides, jute, coffee, opium, and oil-seeds (such as linseed, castor-oil beans, and others), and other imports are metal goods, machinery, and sugar.

The country has a greater mileage of railway than Canada, and it has many canals.

The chief commercial city is CALCUTTA, the capital. Where is it situated with reference to the densely settled part of India? Fort William, the largest and strongest fortress in India, defends the city on the river bank at the south. Around it is the British part of the city, well built of brick and containing the principal public buildings. The Government Houses (which cost £1,000,000), various colleges, and several fine parks, botanical gardens, and drives are among the attractions there. The northern part of the city is built of bamboo, mud, and other light material, and is the native section.

The second great seaport is *Bombay*, on an island off the west coast. It is the nearest port to the Suez Canal and Europe, and has an excellent harbor. Its cotton and woollen mills rival those of Manchester and Leeds in England. It is modern in appearance, with wide streets, splendid buildings, and large and costly Government docks. The native quarter is at the west, with the usual bungalows, and narrow, irregular streets. Find out how the British obtained possession of Bombay. *Rangoon*, in Burmah, is the third port of the Empire; *Karachi*, north of the mouth of the Indus, is the outlet for the grain fields of northern India.

A large proportion of the Indian people live in the country, and the towns seem small when we consider the great density of population. The valley of the Ganges has the greatest number of cities and towns. *Lucknow* is a manufacturing city as large as Montreal. *Cawnpore* is a modern city of about the same size as Toronto. *Delhi* is a large

city, once a native capital. Read the story of the Indian Mutiny, and find out how these three cities became famous. *Agra* also was at one time a native capital. The glory of the city is the Taj Mahal, a tomb of white marble inlaid with precious stones, built by one of the old emperors for his favorite wife. It is considered by some to be the most beautiful building in the world. In erecting it twenty thousand men were employed for twenty-two years, and



FIG. 257—A Masterpiece of Oriental Magnificence.
Palace of Maharaja of Jeypore, India

the cost was between ten and fifteen million dollars. *Benares* is one of the chief centres of the Hindu religion, and has many temples. Other large cities on the Ganges are *Allahabad* and *Patna*.

There are some important towns in the Deccan. *Madras* is an old city built around Fort St. George. Its harbor is arti-

ficial, but its trade is large. It is the third city in size in the Indian Empire. *Haidarabad* is a large city and the capital of one of the native states under British protection. *Surat* and *Calicut* are interesting because of their commercial importance three or four hundred years ago.

There are several British possessions that are dependencies of India. A large part of BALUCHISTAN, north-west of India, is either occupied or controlled by the British. The Khan of Kelat is the most powerful native ruler. The ANDAMAN ISLANDS in the Bay of Bengal are an Indian penal

colony. The capital is Port Blair. The NICOBAR ISLANDS, farther south, have an old established and profitable trade in cocoanuts. The LACCADIVE ISLANDS, west of the Deccan, yield cocoanut fibre for cordage.

Ceylon. This large island is a British colony entirely distinct from India. It is mountainous in some parts, and its climate and rainfall resemble those of India.

The whole island abounds in tropical vegetation. Forests of palms, ebony, satin-wood, and tree-ferns are found everywhere; the bread-fruit tree, with its melon-shaped fruit weighing three or four pounds, and the banana tree provide abundance of food for many people.

The "talipot palm," after growing for upwards of forty years, and reaching a height of eighty feet, blooms with a loud report, and shortly afterwards dies.

The animal life includes nearly all the forms met with in India. Elephant hunting is a sport greatly enjoyed by Europeans, who pay a high license fee to the Government for the privilege of engaging in it. The pearl fisheries on the coast are very valuable, although they are not conducted every year.

The mineral wealth is great. Plumbago, or black lead, is a valuable product, and there are many quarries of precious stones, such as sapphires, garnets, rubies, and amethysts.

Ceylon has been called the "Pearl of the Eastern Seas" because of its rare gems, its profusion of tropical productions, and its delightful climate. The old belief that it was the Garden of Eden survives in the names "Adam's Peak," one of its mountains, and "Adam's Bridge," a row of coral islands extending across the strait to India.

People called the *Singhalese* make up two-thirds of the population. They are believed to be the descendants of a mighty nation which in ancient times occupied the island and built many cities and temples, ruins of which now may be found. More than half the people are Buddhists.

They believe that Buddha, the founder of their religion, made several visits to the island, and they show two relics of that ancient teacher. One is a footprint in the rock on Adam's Peak. The other is a tusk about as large as a man's finger, declared to be one of Buddha's teeth. It is carefully kept in a temple in the city of Kandy, in a casket set with costly gems. It is an object of veneration not only to the Buddhists of Ceylon, but also to the faithful all over eastern and southern Asia, whose lavish gifts have made the temple one of great magnificence.

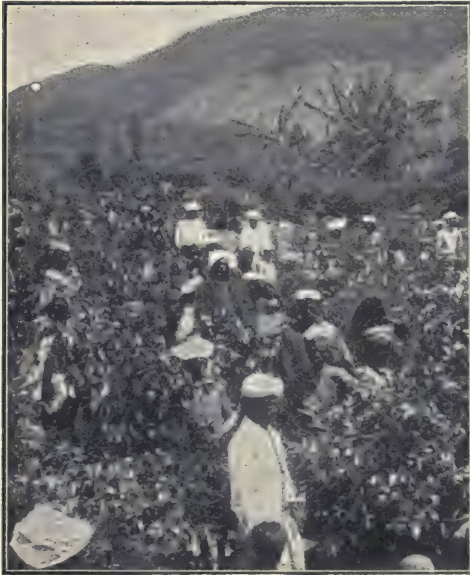


FIG. 258—Coolies picking coffee, Ceylon

The chief industry is agriculture. Tea culture is a very important industry, and coffee is also cultivated (Fig. 258). Tea, cocoanut, and cocoa form the principal exports, while the imports include rice, coal, and cotton goods.

The capital is *Colombo* on the west coast. In the centre of the island is *Kandy*, the old Singhalese capital.

Trincomali, on a fine harbor in the north-east, is the headquarters of the British East Indian fleet.

The MALDIVE ISLANDS, west of Ceylon, pay an annual tribute to the Ceylon Government. Their chief productions are millet and tropical fruits.

In the East Indies. The STRAITS SETTLEMENTS. In the southern part of the Malay Peninsula the British hold a large territory. The greater part of it is a protectorate known as the Federated Malay States. But the islands of

Singapore and Penang, or Prince of Wales, with a little of the mainland, make up a Crown Colony called the Straits Settlements. The whole territory is covered with dense tropical forests producing many kinds of fruits and spices.

The city of *Singapore* is one of the chief commercial centres of the East Indies, and is an important port of call and coaling station for steamers on the way from Europe and India to China. It carries on a large trade in rice, cotton goods, opium, tin, pepper, nutmegs, sugar, and gums, most of which it imports from surrounding islands, and exports to Great Britain, China, and other distant countries. There is good anchorage, and the harbor is strongly fortified.

BRITISH NORTH BORNEO is a protectorate making up about one-third of the island of Borneo along its northern shore. The neighboring island of LABUAN is a Crown Colony. Both mainland and island are mountainous and forest-clad, with tropical climate and productions. Nearly the whole trade is with Singapore. The chief town of British North Borneo is *Sandakan* in the north-east.

Hong Kong and Wei-Hai-Wei. The Crown Colony of HONG KONG is near the mouth of the Canton River on the coast of China. It consists of several large islands, one of which is Hong Kong, and a portion of the mainland opposite the islands. Rice and sugar-cane are raised, and pearl and oyster fisheries are carried on in the bays and channels along the coast.

The chief city is *Victoria* on Hong Kong Island. Its harbor is one of the finest in the world, and the city has been said to be "next to London the greatest emporium of commerce in the Empire." It is the great centre for British trade with China and Japan, and vessels visit it from Canada, United States, India, Australia, and many other distant countries. It is strongly fortified, and is an important British military and naval station.

WEI-HAI-WEI, on the south shore of the entrance to the Gulf of Pe-chi-li, consists, like Hong Kong, of some land on the coast and a few islands near by. Farm products and raw silk are produced, and some foreign trade is being developed. The town has a native population of about two thousand.

In South-Western Asia. CYPRUS is the third largest island in the Mediterranean. What ones are larger? The island is mountainous, without natural harbors, nearly devoid of water, and not very fertile. Most of the people are farmers, and raise wheat, barley, cotton, olives, and grapes. The sponge fisheries on the coast are valuable, and some copper is mined.

The British have occupied the island since 1878. The capital is *Nikosia*, in the interior.

ADEN, "the Gibraltar of the Indian Ocean," is on the coast of Arabia, one hundred miles east of the strait of Bab-el-Mandeb. It consists of two small rocky peninsulas, on the eastern one of which is the town. It is strongly fortified, and is valuable as a coaling station.

Attached to Aden are *Perim*, a strongly fortified island guarding the entrance to the Red Sea; *Socotra*, a large island from which are obtained dates and dairy products, and the *Kuria Muria* Islands off the Arabian coast east of Aden. All these possessions (including Aden itself) are under the direction of the government of Bombay in India.

The BAHREIN ISLANDS, in the Persian Gulf, have pearl fisheries that are regarded as the most valuable in the world.

OTHER COUNTRIES OF ASIA

Russia in Asia. Russia in Asia comprises the vast tract of country known as Siberia, Turkestan in the southwest and a small portion south of the Caucasus Mountains. Although three times the size it does not contain one-quarter the population of Russia in Europe. The climate is inhospitable and the people are generally poor. Grazing, hunting, and fishing are their leading occupations.

In Siberia south of the tundras the country is covered with forest. In the mountainous regions valuable minerals are found—gold, silver, copper, iron, salt, etc. The mines are poorly worked, mainly by convicts from European Russia.

On the shore of the Caspian Sea, an inland salt lake three times as large as Lake Superior, there are the most valuable deposits of petroleum in the world, and the annual production is one-fifth larger than that of the United States. *Baku* is the centre of the oil-country, and is connected by railway with *Batum*, a seaport on the Black Sea.

The great feature of Asiatic Russia is its trans-continental railway, which connects Moscow and St. Petersburg with Vladivostok on the Pacific Ocean. Similar to our Canadian Pacific Railway this road has opened up for settlement a vast tract of country hitherto comparatively inaccessible.

Irkutsk is the chief commercial city of Siberia, *Tiflis* of Trans-Caucasia, and *Tashkend* and *Samarcand* caravan centres in Turkestan.

As Vladivostok is like Quebec, frozen up in the winter, *Port Arthur* on the Yellow Sea has been the seaport and terminus for the railway in winter.

Turkey in Asia. As we have already learned, Asiatic Turkey is much larger than Turkey in Europe, from which it is separated by the Sea of Marmora and the narrow Straits of the Dardanelles and Bosphorus. It includes the great peninsula of Asia Minor, Syria (with Palestine) and the western part of the Arabian peninsula.

The larger part of Asiatic Turkey is a high plateau, with so little rainfall that grazing is the only profitable occupation, except along the sea-coast, where the land is fertile and productive, and figs, dates, olives, and other fruits are cultivated. The eastern part of Asia Minor (Mesopotamia)

watered by the Tigris and Euphrates, was in ancient times very fertile, and wherever irrigation is used the desert becomes transformed into a luxuriant garden.

The most interesting part of the country is the Holy Land (Palestine) in Syria, which occupies a narrow strip of land on the coast of the Mediterranean Sea. Parallel with the coast and separated by low hills from it flows the River Jordan



FIG. 259—Butter making in Goat-skin Churn, Nestorians, Armenia

into the Dead Sea. The latter is over 1,300 feet below the level of the Mediterranean. Why are its waters salt?

The most interesting city is *Jerusalem*, famed as the centre of Jewish and Christian worship, which is now connected by railway with *Jaffa* (the ancient Joppa) on the Mediterranean. *Damascus*, one of the oldest cities in the world, is a great centre for the caravan trade across the desert, and is connected by railway with its seaport, *Beirout*. *Bagdad*, on the Tigris, is an old historic Mohammedan city, with large caravan trade.

The Arabian peninsula is mainly a great sandy desert, with some cultivated land on the coasts of the Red Sea and Persian Gulf. In the part under Turkish rule *Mecca* is the chief town, the birth-place of Mohammed and the holy city of the Mohammedans. South of Mecca is *Mocha*, celebrated for its coffee.

Persia, Afghanistan and Baluchistan. These countries occupy what is known as the plateau of Iran. Owing to its elevation and position, surrounded by high mountains, the climate is very dry, and most of the rivers lose themselves in the sand. In Persia, along the shore of the Caspian Sea and in some of the valleys, the soil is fertile, especially with irrigation, and cereals, fruit, cotton, opium, and silk are produced. Sheep, goats, and camels are raised, and Persian lamb skins are well-known furs. Persian silks and carpets are famous. Commerce is carried on by camel caravans through Bagdad and Tabriz with Trebizond on the Black Sea, and Bushire on the Persian Gulf.

Afghanistan and *Baluchistan* are inhabited by half-civilized warlike Mohammedan tribes, whose occupations are mainly pastoral.

Teheran is the capital of Persia, and *Ispahan*, the former capital, an ancient city. *Kabul*, the capital of Afghan-



FIG. 260—An Afghan woman and child and their home

istan, is often called the "Key to India," from its proximity to the Kaibar Pass, about the only pass through the mountains to India.

The Chinese Empire. What countries, mountains, and coast waters bound this country? Where is its highest land? In what heat belts is it? What parts of North America are in the same belts? Describe the general direction of its winds. Where is the region of heaviest rainfall? What two great rivers drain this region? Where is the least rainfall? Name the desert thus formed. Find on the map the five subdivisions—China Proper, Manchuria, Mongolia, Tibet, and Chinese Turkestan.

The empire is exceeded in area by only the British and the Russian Empires, and is a little larger than Canada.

It is believed to be more than four thousand years old as a nation; it was at the height of its power long before the present European nations began to exist. The population is estimated at over 426 millions. What fraction is this of the population of the world? More than 407 millions of these live in China Proper. Why is this part of the empire so much more densely populated than the other subdivisions?

The Chinese people are generally industrious and thrifty, and though only a small proportion can read and write, they are fond of learning and respected education. They were familiar with paper, the art of printing, gunpowder, and the mariner's compass long before the Europeans. But

they are unprogressive in all their arts, sciences, and beliefs, and they look upon the advances of European civilization over their country with much suspicion. Their houses are generally built of sun-dried brick, bamboo, or mud, according to the wealth of the owners, and are generally low—of one or two stories. In the city of Canton nearly a quarter of a million people live in boats moored on the river. The streets of the cities and towns are generally narrow, crooked, and filthy, and the chief public



FIG. 261—The Leaning Tower, of Soo-Chow (1,300 years old), China

buildings are the pagodas (temples), and the warehouses to accommodate foreign trade. The bulk of the people are of the Buddhist religion, but the teachings of Confucius are held in high esteem alike by nobility and common people. The land is ruled by an Emperor who has despotic power.

European powers are gradually acquiring territory in China. Great Britain holds the island of Hong Kong and adjoining islands and mainland, and has a lease of Wei-Hai-Wei on the Yellow Sea. The Germans and French have ports on the eastern coast.

The resources of such a vast country are naturally great and varied. But in this empire scarcely any of them are developed. Agriculture is the great industry, and even this is conducted by rude and antiquated methods. The chief crop is tea, and other important crops are wheat, barley, maize, millet, rice, sugar, poppies, and the mulberry. China Proper is like a great garden—every



FIG. 262—Chinese Junk, under full sail, on the Yellow Sea, near Manchuria

available foot of land is carefully worked. The mineral wealth is great; vast coal-fields, and rich mines of iron, copper, salt, and china clay (out of which porcelain or *chinaware* is made), underlie much of the country. Manufactures are unimportant because of the neglect of the coal mines, the

scarcity of machinery, and the general opposition to progress among the people. Silk of a fine quality is made by hand, and this is the principal product of the country.

For many centuries China had no foreign commerce whatever, and only as a result of wars was she forced to open her ports to out-

side nations. The first to be opened was *Canton*, and now there are nearly forty of these "treaty ports." By far the largest amount of trade is with Britain. The chief exports are silk and tea, and the chief imports cotton goods, iron, and machinery. The highways of internal trade are the rivers and canals. The Grand Canal, seven hundred miles long, was carried over all obstacles at great expense. Roads are badly kept, but a great trade is conducted over them. Opposition of the people to innovations of outside countries has also prevented the construction of railways, but this is now being overcome by the British and other Europeans. About 2500 miles are now in operation and a number of lines are being built in the east and north-east.

As we should expect, there are many cities whose population exceeds 500,000, and several with more than a million.



FIG. 263—A five-story Pagoda on the northern wall, Canton, China

Why are there so many large cities on the Yang-tse and so few on the Hoang? The largest city in the empire is *Canton* in the south (Fig. 263). Near it is the British colony of Hong Kong through which a large proportion of the trade of the empire passes. *Shanghai*, near the centre of the east coast, has the largest foreign trade of any of the treaty ports. PEKING, the capital, consists of two parts, the inner or Tartar city, and the outer or Chinese city. The inner city is square, walled, and strongly fortified, and contains the royal palaces and public halls. The centre of the inner city is rigidly guarded against foreigners. The outer city is very large, and of the general Chinese type. Many of the streets—in the Tartar city especially—are very wide, lined with substantial brick buildings, and present a busy and somewhat modern appearance.

Korea is slightly larger than the Province of Manitoba. How does it compare in size with other peninsulas, such as Italy and Nova Scotia? What waters and countries form its boundaries?

The people are uneducated, and resemble the Chinese in appearance and character. Those who pay any attention to religion are chiefly Buddhists and Confucians.

Korea is an agricultural country, but the methods of farming are very primitive. Wheat, millet, rice, beans, ginseng (from which a medicine is prepared), and tobacco are cultivated; and rice, beans, and ginseng are exported in large quantities. The country is rich in mineral wealth, and gold, copper, iron, and coal are abundant.

Railways are being constructed, and are to some extent taking the place of pack-horses and oxen. An electric railway has been constructed in the capital, and the telegraph, the telephone, and a postal system have been introduced.

The country is under the government of an Emperor, whose power is to some extent restricted by a cabinet, although until recently it was absolute.

SEOUL, the capital, is an important city of about 200,000 people (Fig. 264). *Che-mulpo* and *Fusan* are busy sea-ports.



FIG. 264—The beautiful Temple of Heaven where the Emperor worships, Seoul, Korea

The East Indies and Indo-China. This group of islands lies south-east of Asia. Name the largest islands, and the chief seas and straits between them. They are in general mountainous, and in some parts volcanic. For the most part they are covered with dense forests, but contain many fertile valleys and hillsides where tropical fruits, spices, and coffee are cultivated in very large quantities.

JAVA is the most important of the Dutch Islands. It is about as large as the Atlantic Provinces of Canada, but contains nearly four times as many people as the whole Dominion. It produces more coffee than any other country in the world, except Brazil, and also much cane sugar. *Batavia*, the capital, is the commercial centre of the Dutch East Indies. BORNEO is the largest island in the group. Its northern part belongs to Great Britain. SUMATRA produces



FIG. 265—Making manilla rope, Philippine Islands

coffee, pepper, rice, india rubber, gold, coal, tin, and lead. BANCA also supplies large quantities of tin.

THE PHILIPPINE ISLANDS were ceded by Spain to the United States in 1898. Where are they? Hemp and timber are produced. *Manila*, a city as large as Montreal, is the capital, and an important

trading centre, with large exports of hemp (Fig. 265). Find out what kind of paper is made from manilla hemp.

GUAM, the largest island in the Ladrone group in the Pacific, was obtained by the United States from Spain in 1898.

Indo-China, as the peninsula is called, which lies between the Bay of Bengal and the China Sea, comprises British Burmah, French Indo-China, and the Kingdom of Siam separating these two. The country is watered by several large rivers. What are their names? The people and the products of the country are similar to those of the Malay Peninsula. *Bangkok* is the capital of Siam, and *Saigon* of French Indo-China.

Japan. Japan consists of four large and many small islands, said to number over 4,000, extending along the east coast of Asia from Formosa northward. The whole territory is mountainous, and in many places volcanic.

In what heat belts is it? The warm Japan Current and warm ocean breezes make the climate mild. From what direction do the winds blow? Is the rainfall heavy or light?

Both the area and the population of the country are a little greater than those of the British Isles. The people are courteous, fond of education, su-

perior to the Chinese in intellect and morals, and in recent years have been adopting European civilization. The government is under an emperor known as the Mikado.

A large part of the land is fertile and carefully tilled. Rice, the chief food of the people, is the largest crop; barley, rye, and wheat are raised; and great quantities of tea, sugar, and silk are cultivated and prepared for the market. The trees include pine and spruce in the north, and mulberry, camphor, and bamboo in the south. One kind of tree yields the gum used in the manufacture of lacquered ware. Many fruit trees, such as orange, apple, plum, peach, and cherry are grown, but for their bloom, not their fruit, as the latter is inferior. The greatest attention is paid to the culture of flowers of most charming beauty and fragrance. Houses and temples are surrounded with delightful flower-beds, the parks of the cities abound



FIG. 266—Japanese lady travelling in a mountain chair, Japan



FIG. 267—Factory girls decorating cheap pottery, Kyoto, Japan

from India and the United States. Many varieties of fancy goods also are made there (Fig. 267). Name some that you have seen. Manufactured products of many kinds and silk form the chief exports of the country.

State as many ways as possible in which this country resembles the British Isles.

with some of the choicest kinds, and even roadsides and fields are at times covered with blossoms.

Japan is a busy and prosperous country, already far in advance of any other nation of Asia. Her rich coal mines supply fuel for many silk and cotton factories. Where is the raw silk obtained? Raw cotton is imported



FIG. 268—Flower lovers lunching, Tokio, Japan

Most of the foreign commerce is with Great Britain, India and other British colonies, the United States, and China, and is carried on through ports that have been specially opened for trading purposes. *Yokohama* is the most important port of the empire. Its harbor is visited by vessels from many different countries, including the Canadian steamship line from Vancouver. What do you consider the principal goods brought in and sent out through this port?

TOKIO, the capital, is the largest city of the empire, and has imposing palaces, rich temples, beautiful parks (Fig. 268), and wide well-paved streets. It has some trade, but its harbor does not accommodate large sea-going vessels.

Draw an outline map of Asia (Fig. 269) and name in it the principal cities and towns.



FIG. 269—Outline Map of Asia



FIG. 270—RELIEF MAP OF AFRICA





FIG. 272—Port Said—the northern entrance to the Suez Canal. At this port all vessels passing through the canal pay toll

AFRICA

Position and Extent. Name the two large continents in the Eastern Hemisphere. What two seas separate them? What isthmus joins them?

A canal (Fig. 272) has been cut across this isthmus, and the ocean voyage between European countries and India has been shortened by about four thousand miles. By what route was trade carried on with India before the canal was made? Through what waters do vessels now sail from Britain to India?

Is the larger portion of Africa north or south of the equator?

Give the boundaries of Africa. Find by means of the school globe from what continent it is separated by the Atlantic Ocean.

How does Africa compare in size with Eurasia, North America, and South America? Is it larger or smaller than

Asia?—than North America? Determine its greatest length and its greatest breadth.

Surface. Where in Africa are the two branches of the world's great mountain system?

The surface of Africa is more level than that of any of the other continents. The continent is a vast plateau bordered on every side by mountains; those of the world's mountain system are high, the others consist of low ridges or steep descents to the ocean.

What highland lies near the southern end of the Red Sea? This is the most elevated part of the continent, and though it is near the equator its great height makes its climate cool and agreeable. The two mountain peaks south of this highland are the highest in Africa, both being nearly 20,000 feet above sea level. Name these peaks.

What mountains are in the north-west corner of the continent? They are the second highest mountains in Africa, one peak reaching a height of about 14,000 feet. The peak of Teneriffe in the Canary Islands rises to a height of about 12,000 feet.

Climate and Rainfall. In what heat belts is Africa? What heat belt contains the greater part of it? What part of the continent is in the Cool Belt? The only localities, therefore, that have temperate climate the year round are the highlands of Abyssinia and the north-west coast, and the shore regions in the extreme south. No snow falls in Africa except on the summits of a few high mountains.

What are the directions of prevailing winds in different parts of Africa? Why is the Sahara Desert so dry? Why are there heavy rains along the shores of the Indian Ocean? Why is there only slight rainfall in the south-west? Name the desert there. Find on the map the Gulf of Guinea in the west. The land along the north shore of

this gulf causes slight monsoons, similar to those in India, and when the hot moist winds blow in from the ocean they cause heavy rainfall. In what time of year do you think this occurs?

Where, then, are the two regions of heaviest rainfall, and the two of least rainfall, in Africa? How much of, and what part of, the continent receives moderately heavy rains?

Drainage. Name the three large rivers which drain the eastern and central rainfall regions, one flowing north, one west, and one east. Where does each empty? What large lake is drained by each? There are many smaller lakes among the mountains in the eastern area of moderate rains. Name the two important rivers draining the southern part of the area of moderate and light rainfall, one flowing into the Indian Ocean, and the other into the Atlantic.

The Congo is the largest river in the continent. Why should it be large? How does it compare with other African rivers in the number and size of its tributaries? What large American river is in about the same latitude? Where are Stanley Falls and Stanley Pool? Between these two points—a distance of about one thousand miles—the river is navigable for small vessels, and will probably become an important highway in central Africa. In passing through the mountains on the west coast rapids are formed for a distance of two hundred miles, but in the last one hundred and ten miles of its course it is navigable for large vessels.

The Zambesi is joined by many tributaries in the western part of its basin, making its volume very great for the larger part of its course. Its delta is wide, but sand-bars prevent ocean vessels from entering it. Smaller boats

that can cross the sand-bars may sail three or four hundred miles up the river. Locate Victoria Falls.

At Victoria Falls the river is nearly a mile wide, and there its waters plunge suddenly into a chasm about 400 feet deep lying across the channel of the river, forming great white clouds of vapor which rise hundreds of feet into the air. From the left hand or northern end of the chasm a zig-zag gorge extends for thirty or forty miles, through which the water rushes at a terrific rate.

Name the largest river draining the regions of moderate and heavy rains in the west. It receives many tributaries near its source and near its mouth, but very few in its middle course. Explain why. Near its delta it is between two and three miles wide.

What large lake lies east of the Niger? It may be regarded the centre of an inland basin, though one river flows out of it and is lost by evaporation in the desert. Because of the latter stream the waters of the lake are only slightly salt. In the wet summer season heavy rains swell this lake larger than Lake Superior, but in the dry season it decreases to about one-fourth its former size, its shores becoming broad marsh lands.

When a river dries up for part of the year its channel is called in Africa a *wady*. Many of these are found in the upper Nile basin.

The River Nile. The Nile is the longest river in Africa, and after a course of about 3,500 miles it empties through a broad delta into the Mediterranean. Compare its length with the total length of the continent.

In what lake does the Nile take its rise? It is the largest lake in Africa, and the second largest body of fresh water in the world. How far is it from the equator? What two mountain peaks lie east of it?

The river issues from Lake Victoria as the White Nile, and more than two hundred miles from this lake it passes through the north-eastern end of Albert Nyanza (the name "Nyanza" means "lake"). This section of the river is

very rough because of rapids and several large waterfalls, and its banks are high and rocky.

In the upper half of its course it receives many tributaries. Name the chief ones from both west and east. From Lake Albert to the mouth of the Blue Nile the river has in many places no indication of any current, the water is covered with magnificent water-lilies and other flowers, and the banks are swampy and infested with crocodiles and hippopotami.

Below the mouth of the Blue Nile is a series of six cataracts, or waterfalls, separated by stretches of calm water. They are known by their numbers, the First Cataract being the one farthest down the river. From the First Cataract to its mouth, a distance of about eight hundred miles, the current is slow and quiet.

In its lower course no streams join it, so that the largest volume of water in the river is nearly a thousand miles from its mouth. Why does its volume decrease? If it were not for the Nile the country through which it flows in the last thousand miles would be a desert. The summer rains and the melting of the snows in the Abyssinian mountains swell the river and its branches to a very great size, and when the water reaches the plains it overflows the whole country for a distance of several miles on each side, making the land very fertile because of the deposit of rich sediment which is carried down from the mountains. When the floods have nearly subsided, the people sow their grain in the mud and in due time reap a rich harvest.

At Assuan, near the First Cataract, an immense dam of stonework has been constructed across the river. By means of this a large pond or lake has been formed from which a supply of water may be obtained whenever it is needed farther down the river. It was inaugurated by the Duke of Connaught, brother of King Edward, in 1902.



FIG. 273—The Great Pyramid of Gizeh—a tomb of 5,000 years ago, Southern Egypt

The fertility of the land along the lower Nile made it an important country thousands of years ago. The old Egyptian empire had its capital near the mouth of the river and was one of the greatest nations of ancient times. Tombs of many of its kings (Fig. 273) still stand and are known as “the pyramids of

Egypt,”—immense masses of stone-work, square at the base and tapering towards the top. There are also extensive ruins of some of its cities and temples, and these give a faint idea of the greatness and splendor of this ancient empire.

The river has many cities, towns, and villages on its banks, some of which are notable because of their ancient history or because of the part they have taken in modern warfare. Among the important ones are Fashoda on the White Nile, Khartum and Omdurman near the junction of the White and Blue Niles, Cairo (Fig. 274), near the beginning of the delta, and Alexandria on the Mediterranean coast.

The Sahara Desert. The Sahara Desert is nearly as large as Canada, but has less than half the population of our country. It is the largest desert in the world, and

forms part of a great barren region extending from the Atlantic Ocean through Africa far to the east into Asia and known by different names in different parts. What are some of these names? The barrenness is not due so much to the poor nature of the soil as to the absence of rain. In some localities



FIG. 274—Indian Palms at Cairo, Egypt

there is not even a shower for periods of two, three, four, or even five years, and when any do occur they are very light.

Nearly all of the Sahara consists of a high plateau, and on the borders there are mountains as much as a mile and a half high. The latter are snow capped for three months in the year, and down their sides flow streams which render a little of the soil fertile, but these streams are soon lost in the desert. There are also rocky and stony regions, and in many places salty marshes which once were probably lakes with no outlets. The western part of the desert consists of extensive sandy plains, where the sand is driven about by winds from the sea. The huge drifts of sand are called *dunes*, and are often like hills, three or four times as high as a tall church spire.

In many parts of the Sahara water may be reached by digging or boring, and along the northern border near the

Atlas Mountains thousands of wells have been sunk. In other parts springs are found and these are surrounded by green grass and date palms. Such fertile spots are called *oases* and are the only places in the desert where people can live. The lines of travel lie from one oasis to another across the desert, and they are therefore of great value in promoting trade between the countries on the northern and southern borders. Elsewhere in the desert there is scarcely any growth, except that in some localities a few coarse grasses and thorny trees and shrubs are found.

The Desert of Sahara is probably the hottest place on earth. (Where is the coldest place?) But great changes of heat may occur at the same place in a single day. During the day the sand and rock rapidly become heated and give out their heat to the air; then during the night they rapidly cool. At two o'clock in the afternoon it may be hotter than on our hottest days in July, and at midnight so cool that water will freeze. These great changes of temperature often cause hot and fierce winds to arise suddenly and raise great clouds of dust which sweep over the desert. In such cases travellers and their camels have to lie down and almost bury their faces in the sand; even then they can hardly endure the stifling heat and terrific force of the storm. These winds are called *simooms*.

Draw a map of Africa (Fig. 285) and on it mark the principal mountains, rivers, lakes, and deserts.

Coast-line and Islands. Would you describe the coast-line of Africa as even or broken? What other continent have you found to have a similar coast-line?

What cape forms the most easterly point of the continent? Name the gulf, strait, and sea between this cape and the Mediterranean.

What cape is at the eastern end of the Atlas Mountains in the north? There are one or two points west of it that

are a little farther north. What strait connects the Mediterranean with the Atlantic?

What cape is the most westerly point of Africa? It owes its name to the dense vegetation on its summit (its name means "green").

Name the three island groups off the coast between the Strait of Gibraltar and Cape Verde. The central of these belongs to Spain, the others to Portugal. They are all volcanic groups, and in the Canaries is the peak of Teneriffe, more than two miles high. The latter islands were the original home of the canary bird.

What is the only large gulf on the western side of the continent?

What two solitary islands are out in the Atlantic, southwest of the Gulf of Guinea? Both of them are British, and they are useful as coaling stations for steamships.



FIG 275—Water Carriers, Antananarivo, Madagascar

What cape is at the south-west corner of Africa? It is not the extreme southerly point of the continent, but is where the coast-line takes an important turn eastward.

It was named by Bartholomew Diaz, of Portugal, its discoverer, "Cape of all the Storms." But the King of Portugal, wishing to establish trade with India by the route around this point, changed this name of ill omen to the one it now bears. It is a headland one thousand feet high, composed largely of granite rock.

What large island is south-east of Africa? It is one of the largest islands in the world, and belongs to the French (Fig. 275). What channel separates it from the continent?

Find the island of Zanzibar near the coast, north-west of Madagascar. It is an important trading centre, and is a British Protectorate. Name other British islands and island groups off the east coast.

Draw a map of Africa (Fig. 285) and on it mark the principal coast features and islands.

Vegetation. The forest regions of Africa are in the zone north and south of the equator.

In what heat belts and rainfall regions are they? These forests abound with innumerable forms of tropical vegeta-



FIG. 276—In the Hot Belt region of Egypt

tion, many yielding fruits and other foods which form the chief support of millions of people and vast numbers of wild animals.

Palms of many kinds grow in the central forest regions and ex-

tend both northward and southward over nearly all the continent (Fig. 276). In the Sahara they often indicate the presence of springs of water.

Bordering the dense forests are broad areas of grass lands and these gradually merge into the deserts of the north and south-west.

The northern coasts of Africa have a vegetation resembling that of southern Europe. Wheat and other grains, and many fruits, such as grapes, oranges, lemons, and dates are grown over the whole region, and in the valley of the Nile cotton, rice, beans, and Indian corn are important crops.

On the eastern and western coasts of the Hot Belt cotton and sugar-cane are cultivated, and palm-oil is manufactured and exported to Europe.

In the extreme south we again find a wheat region. There farming of wheat and other grains is a leading industry. Tea and coffee also are cultivated in this part of the continent, especially in the south-east.

Compare this continent with South America as to location of dense forests, open forests, grass lands, deserts, wheat areas, and fruit areas. Why are the deserts of Africa so much larger than those of South America?

Draw a small map of Africa (Fig. 285) and indicate on it the forest, wheat, cotton, and desert regions.

Animals. The animals of the northern coast regions of Africa resemble those of Europe. The Sahara has proved to be a great barrier that scarcely any animal, except the camel, has been able to cross.

All the animals of Africa have coverings suitable for a warm climate,—none of those native to the continent have heavy fur, wool, or thick feathers.

The plant-eating animals are numerous south of the Sahara, and in some cases are of very great size. The



FIG. 277—Rhinoceros

elephant is the largest of land animals. Where else are elephants to be found? The African variety is less docile than the Indian. The hippopotamus is another huge beast living in marshy lands and near large rivers. Both it and the elephant are hunted for the ivory in their tusks and teeth. The rhinoceros (Fig. 277) is found in African forests. Where else is it found? The African variety has two horns growing up-

wards from its nose, and the Indian only one. All of these animals are inoffensive, unless roused or wounded, and then they defend themselves with great fury. The giraffe is the tallest animal known, being often sixteen or eighteen feet high (Fig. 278). It chews the cud like the cow. The elephant and the giraffe eat fruit and leaves of trees. How are they specially adapted for gathering their food.

The striped zebra, the partially striped quagga, and the ass resemble in some respects our horses. Cattle are represented by the buffalo, one variety of which has been

trained to be a beast of burden, and the other, known as the Cape buffalo, is wild and fierce. The antelopes of Africa include the eland, the koodoo, the gnu, and the gazelle. The forests are full of many kinds of monkeys, of which the largest is the gorilla. Where else are monkeys found?

Not many African animals are flesh-eating. Of those which prey upon other animals the chief are the lion (Fig. 279), the leopard (Fig. 280),

the crocodile, and the python, the last-named being a snake that often attains a length of fifteen feet. The cowardly hyæna and the howling jackal as often feed on carrion as on sheep and other small animals which they secure alive.

The most remarkable bird of Africa is the ostrich. The well-known ostrich plumes are taken from its wings and tail, and for these the bird is sometimes hunted, but most of the feathers are now obtained from the ostrich farms of South Africa. There are many other birds in Africa,

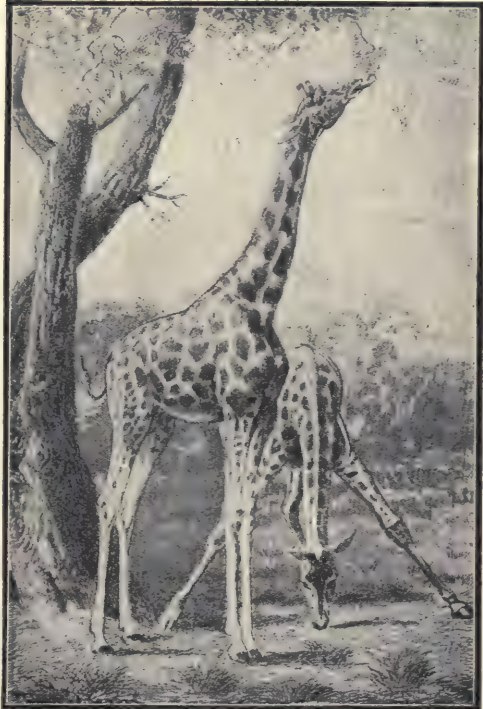


FIG. 278—Giraffes feeding



FIG. 279—Lion

Near Cape Bon is the site of the ancient city of Carthage, which was the head of a mighty empire more than two thousand years ago. The city

some of which, as parrots and flamingoes, have very brilliantly colored plumage.

History. For many centuries very little of this continent was known to the world, except the parts bordering on the Mediterranean and Red Seas.

The Egyptian empire had its centre in the lower Nile district and was a powerful state four or five thousand years ago. It was the land of the Pharaohs, of Joseph, and of Moses.

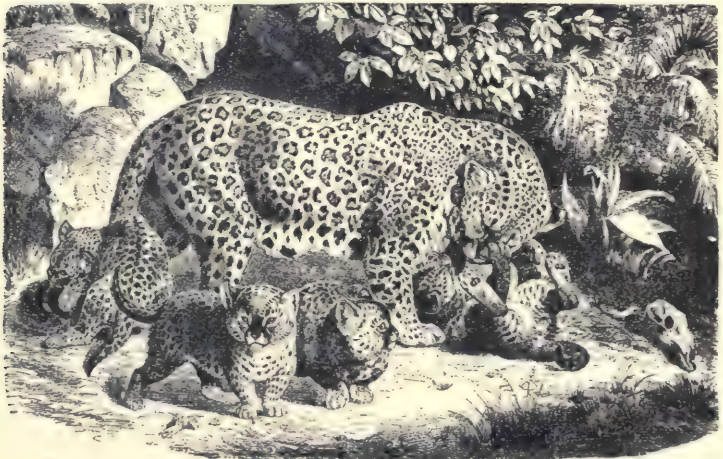


FIG. 280—Leopard

was completely destroyed by the Romans.

About four hundred years ago a Portuguese navigator named Vasco da Gama sailed around the south end of the continent and opened up a new trade route to India. This was about eleven years after Diaz sighted the "Cape of all the Storms." From that time forward little further exploration was carried on in Africa till less than fifty years ago, but in recent years much has been done towards opening up the continent by David Livingstone, Henry M. Stanley, and many others. However, it is even yet called the "Dark Continent," because many parts of it are not well known.



FIG. 281—Street Minstrels, Cairo

People. All the people of the northern coasts are of the White Race, although most of them have a dark brown complexion. They are known as *Berbers*, and the coast countries where they live are therefore called the Barbary States. The Berbers of the west are the *Moors*, and they have given their name to the country Morocco. The Moors were once very powerful, and owned a large part of Spain.

Nearly the whole population of the Sahara and of the deserts of Arabia and Persia, is made up of wandering Arabs called *Bedowins*. These also belong to the White Race and have a dark complexion. They raise some of the finest horses in the world, and are noted as expert riders.

The religion of nearly all the people of northern Africa is Mohammedanism, but in Egypt there is a large number of Christians called *Copts*.

In the territory extending from the Sahara to the southern end of the continent the natives are all of the Black Race (Fig. 282). Those in central Africa are true *Negroes*. They are more or less barbarous, living generally in huts made of grass, which are sometimes collected together into villages and their chief occupations are growing



FIG. 282—A baby from Dahomey in Western Africa

maize, hunting wild animals for food, and carrying on war with neighboring tribes. Their religion is paganism of many different forms. They have no writing, no schools, and no culture, and civilization is spreading only very slowly amongst them. The "pigmies," tribes of low stature in the Congo basin, are expert elephant hunters. The Kaffirs of the south (Fig. 283) are well developed physically, and are more intelligent than the other tribes of the Black Race in the continent. They are not regarded as true *Negroes*, but are sometimes called *Negroids*.

Europeans are numerous in their own colonies throughout Africa, especially near the coasts. Many of British and Dutch descent are prosperous people in South Africa, where agriculture, ostrich farming, and gold and diamond mining are leading pursuits.

The population of the continent is estimated at about 150 millions, of whom probably about one-fourth are of the White Race, and the remainder Black.

Subdivisions. Only a small part of the African continent can be called independent. Morocco in the north-



FIG. 283—Kaffirs in Fighting Costume

west, Liberia in the west, and Abyssinia in the east are the only states not controlled by outside countries.

Morocco is ruled by a despotic sultan who is exceedingly strict and severe with his subjects. The capital is the city where the sultan may be residing at any time—usually Fez or Morocco. Find out from a dictionary what is meant by “morocco” leather.

Liberia was founded in 1820 by some excellent people of the United States as a home for liberated slaves. It has become independent, and its capital is named in honor of James Monroe, who was President of the American Republic when the little State was founded.

Abyssinia is a mountainous country drained by tributaries of the Nile. In its valleys grow oranges, lemons, dates, sugar-cane, and many other plants of the hot belt, higher up the mountains wheat and corn are cultivated, and still higher pines and other plants of the cool belts are found. The people are not highly civilized though they are Christians, and many are occupied in herding cattle, sheep, and goats. They have successfully resisted the attempts of Italy to establish a protectorate over their little kingdom. The country is divided into several districts or sub-kingdoms, each with its own capital.

The basin of the Congo river forms the Congo Free State. It is practically a dependency of Belgium. The



FIG. 284—A Grocery Store in Tunis

aim of the Belgian Government is to keep this vast area open to foreign nations for purposes of trade, and to suppress the slave traffic. A Governor-General represents the King at Boma. The natives are peaceful, and with them is conducted a large trade in bananas and other fruits, ivory, palm-oil, india-rubber, beeswax, and gums.

The remainder of Africa is divided amongst several European nations.

The various British possessions are named and described in the next chapter.

The chief possessions of other European countries are as follows:

France—Algeria, Tunis (Fig. 284), the Western Sahara, parts of Western Sudan, French Congo, Madagascar, French Somaliland.

Germany—German East Africa, German South-west Africa, Kamerun.

Portugal—Portuguese East Africa, Portuguese West Africa, Portuguese Guinea, Madeira Islands, Cape Verde Islands.

Spain—A large territory on the west coast of the Sahara, Canary Islands, Fernando Po, and other islands in the Gulf of Guinea.

Italy—Eritrea, Italian Somaliland.

Turkey—Egypt, Tripoli.

EGYPT. Locate this country. What is its great river? Except along the flood plain of that river the land is desert. The country is nominally governed by the Khedive,

who is tributary to the Sultan of Turkey, but is practically controlled by Great Britain through a resident agent. The capital is *Cairo* (Fig. 281).

The Suez ship-canal, 99 miles long, which connects the Mediterranean with the Red Sea, belongs to Great Britain, and forms the great water highway between Europe and Asia.

Draw a map of Africa (Fig. 285) and mark on it all its subdivisions and the capitals of as many of them as possible.



FIG. 285—Outline Map of Africa

BRITISH POSSESSIONS IN AFRICA

Cape Colony and Natal. The Colony of the Cape of Good Hope is the most important British possession in Africa, and Natal, east of it, comes second.

The land rises in terraces from the southern coast to a high plateau in the interior, called the *veldt*, or prairie. When the sun is nearly vertical in the summer the whole country is warm and dry, but in the winter when the sun is far north of the equator much rain falls, especially in the south and east. Why is there very little rain in the north-west? The rivers are not very useful for commerce, because they are too swollen in the wet season, and too low in the dry season.



FIG. 286—A Zulu Witch-Doctor

More than three-fourths of the people are of the Black Race (Fig. 286). The others are European—the majority in the north and west being of Dutch descent, and in the east and south British. Nearly all the blacks are laborers engaged in agriculture, mining, or domestic work.

The principal industries are farming, herding, and mining.

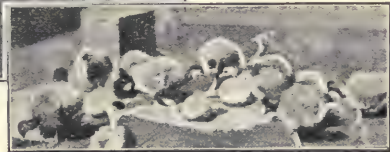
The ordinary grains grow well and are cultivated almost everywhere. Grapes,

from which wine and brandy are made, and apples, peaches, oranges, and many other northern and southern fruits yield enormous crops. Tea planting has been recently introduced into Natal, and already millions of pounds of tea are produced.

Pasturing is conducted on the *karoos* (terrace plains), and ranches of 3,000 to 15,000 acres are common. The second terrace from the coast, known as the Great Karoo, is the



1



2

FIG. 288

1. An Ostrich Farm. These birds are raised for their feathers, oil, and eggs.
2. Young Ostriches recently hatched. These little birds will grow to a height of about eight feet.

largest grazing district in South Africa, and one of the finest to be found in any country. During the wet season it becomes green with grass and foliage, and abundant pasture is afforded for great herds of cattle, horses, sheep, and goats. Ostrich farming is also a leading industry on the Great Karoo, and hundreds of thousands of pounds of ostrich feathers are obtained each year (Fig. 288). Mohair in large quantities, wool, and wine are other products and articles of export of the grazing districts.

The minerals of Cape Colony are found in the north. Of these the diamond is the chief, and nearly twenty-eight million dollars' worth were exported in 1903. The town of



FIG. 289—African employees at DeBeers Diamond Mines, Kimberley, South Africa

Kimberley is in the centre of the diamond district (Fig. 289), and owes its rapid growth to its mining operations. Natal has large mines of coal and iron, and the output from them is increasing every year.

The chief trade of South Africa passes through *Cape Town*, the

capital of Cape Colony. State what you think are the principal exports. The city is situated on Table Bay, near the base of Table Mountain, about fifty miles north of the Cape of Good Hope. Its public buildings are imposing, and it is the seat of the South African University. *Port Elizabeth* is another important seaport. *Simon's Town*, south of Cape Town, is the British naval station in South Africa. *Durban* is the chief commercial city of Natal, and *Pietermaritzburg* is the capital.

BRITISH BECHUANALAND, north of the Orange River, and WALFISCH BAY, the only important harbor in German West Africa, are British possessions annexed to Cape Colony.

Transvaal and Orange River Colonies. These states lie north-east of Cape Colony. The country is in general a broad plateau, mountainous in the east and south, and in many places dotted with isolated hill-peaks called "kopjes" (pronounced *kopyays*). Their western part is

the beginning of the broad veldt which extends to the desert and ocean. What desert? What ocean?

Three-fourths of the people are blacks. The Europeans are largely of Dutch descent, and are called *Boers* (the Dutch word for *farmers*). The industries are much the same as in Cape Colony. Agriculture in the Transvaal, and stock-raising in Orange River Colony give employment to the majority of the people. Mining is an important source of wealth to the country. In the Transvaal the gold mines are the richest in the world, the output in a single year before the recent war being worth close to ninety millions of dollars. The diamond mines in south-western Orange River Colony are also very productive. Rich mines of coal are found in both colonies.

The industries and trade of these two countries were much injured during the war by which they were acquired by Great Britain (1899-1902), but these are rapidly recover-



FIG. 290—The Market Place, Johannesburg. The wagon drawn by eight oxen is a typical mode of travel in this hilly country

ing. The chief seaport for the district is the town of Lourenço Marquez in Portuguese territory east of the Transvaal, but a large trade also is carried on through Cape Town and Durban, from which railways extend in various directions, the principal line being that from the "Cape to Cairo," now built as far as Buluwayo, the capital of Rhodesia (about 1,400 miles).

The chief commercial centre is *Johannesburg* (Fig. 290) in the Transvaal. It contains many English people, is the centre of the gold-mining operations, and is the largest city in South Africa. The capital of the Transvaal is *Pretoria*, and of Orange River Colony *Bloemfontein*.

Bordering the Transvaal on the west and extending to the Zambesi River is the BECHUANALAND PROTECTORATE; stretching northwards from the Transvaal to Lake Tanganyika is RHODESIA, and lying between Rhodesia and Lake Nyassa is the smaller CENTRAL AFRICA PROTECTORATE. Find all these on the map.

The natives of South Africa are very numerous, and belong mainly to two great tribes—the Kaffirs and the Hottentots. The Kaffirs are a tall, warlike, and intelligent people, but the Hottentots are small, of a dirty yellow color, and very degraded. The latter are gradually disappearing.

In West Africa. There are several British possessions along the coast of western Africa. Four are Crown Colonies, namely GAMBIA and SIERRA LEONE south of Cape Verde, and GOLD COAST (including Ashanti) and LAGOS on the Gulf of Guinea. The wide territory which includes the basin of the lower Niger and extends as far north-east as Lake Chad is called NIGERIA, and is a protectorate.

In all these districts the climate is so hot and moist that very few white people can live there, and the whole region is covered with forest, a little cultivated land being found only around the villages. The population of Negroes is very great; the majority are either Pagans or Mohammedans.

Trade is carried on with the natives by barter, the British giving cotton goods, guns, gunpowder, tobacco,

fancy goods, and many other articles in exchange for native woods, cocoa-nuts, palm-oil, india-rubber, cotton, ivory, and many other products of the Hot Belt. The rich gold deposits have given one of the colonies its name, and Britain has carried on a trade there for more than three hundred years.

Freetown, capital of Sierra Leone, originally settled as an asylum for liberated slaves, is the most important seaport in western Africa. It has an excellent harbor, almost the only one on the west coast. *Lagos* is the largest town in West Africa, and is an important trading centre. *Cape Coast Castle* and *Accra* in Gold Coast, and *Bathurst* in Gambia are also commercial towns.

In East Africa. The British Possessions in eastern Africa are the protectorates of EAST AFRICA, north and east of Lake Victoria, UGANDA, on the western shore of



FIG. 291—Wabeni School Girls, British East Africa

the same lake, ZANZIBAR, off the coast of German East Africa, and SOMALILAND along the coast of the Gulf of Aden (Fig. 291).

Of these the smallest, but the most important commercially, is Zanzibar. The territory is made up of the islands of Zanzibar and Pemba, and the coast region of the East Africa Protectorate, and the native ruler is called a sultan. The chief product is cloves, of which many millions of pounds are exported every year. The town of Zanzibar is the most important trade centre and seaport on the eastern coast of the continent.

The mainland is more elevated and mountainous, and therefore in addition to the raising of tropical productions there is much grazing of cattle, sheep, and goats. The products of the flocks and herds are important articles of export.

Great Britain is gradually extending her influence in the Egyptian Sudan, or basin of the upper Nile. The whole territory under British influence from the mouth of the Nile to Zanzibar has an area equal to fully half that of the Dominion of Canada.

British Islands around Africa. Find on the map ASCENSION ISLAND. It is used as a coaling, victualling, and supply station for the British navy, and it has an efficient naval hospital. The Governor, who is a naval officer, has authority on the island as absolute as a captain on board a man-of-war. Turtles and sea-birds lay their eggs in countless numbers on the shores. *Georgetown*, the principal village, is fortified.

The island of ST. HELENA, south-east of Ascension, is also a British coaling station, but its value in this respect has decreased since the opening of the Suez Canal. Why should it? Find out how this island became famous in the history of Napoleon Bonaparte.

MAURITIUS is a large island in the Indian Ocean. About how far is it from Madagascar? Its principal exports are sugar, rum, molasses, and vanilla, and its imports cotton goods, coal, and machinery. The capital is *Port Louis*. Several small islands in the vicinity are dependencies of Mauritius.

The SEYCHELLES ISLANDS lie north-east of Madagascar. What large town on the east coast of Africa is in the same latitude? How far from this town are the islands? Important exports are cocoa-nuts and their oil, tortoise-shell, and vanilla. *Victoria* is the capital. Many small islands and island groups north and north-east of Madagascar are dependencies of the Seychelles.

There are two large gulfs, one on the north and the other on the south shores. What are their names? The name "bight" is sometimes given to an open bay formed by a great curve in the shore.

What strait is at the north-east point of the continent? What large island does it separate from Australia? What strait and island are south-east of the continent? The latter island is slightly smaller than the Canadian province of New Brunswick.

Surface, Climate, Drainage. Australia consists for the most part of a vast plateau surrounded along the coast by ranges of mountains. The highest elevations are along the east coast, and in south-eastern Australia and Tasmania there are some peaks over a mile high. Mount Kosciusko (7,336 ft.) is the highest mountain in Australia.

Is Australia north or south of the equator? In what heat belt is the greater part of the continent? What parts of Africa and South America are in the same belt? What part of North America is in the corresponding belt north of the equator? Do you think then that Australia is warmer or colder than Canada?

The summer season in that country is marked in the east and south-east by heavy rains which swell up the rivers and lakes. From what direction do the rains usually come? In the winter season it is not cold enough for snow, and there is not very much rain. So the rivers become very small or disappear altogether, and many of the inland lakes become mere salt marshes or muddy pools. Name two lakes.

Lying between the mountains of the south-east and the plateaux of the centre and west is a broad low plain watered by the largest rivers of the continent. In what

direction does it slope? What is the chief river, and what is the largest tributary of this river? These rivers are navigable for small vessels for nearly three hundred miles from the sea.

The western plateau is nearly all desert land, and has never been thoroughly explored. In its northern part it is called the Great Sandy Desert, and in its southern the Great Victoria Desert. Why is there so much desert land in Australia?

Vegetation. Where are the dense forests in Australia? In what rainfall regions are they? In these forests the vegetation is as luxuriant as in the heart of South America or Africa. Where also are the open forests, grassy lands, and deserts?

Many of the native plants of Australia are different from any found elsewhere in the world. In the forests the most remarkable tree is the eucalyptus, or gum tree. It is the tallest tree known, some specimens growing nearly five hundred feet high. Its leaves grow at first horizontally, but afterwards stand up with their edges to the sun. One kind of eucalyptus, called the cider tree, yields a refreshing sap in spring, and from others oils, perfumes, and medicines are prepared. The grassy and desert lands are in many places covered with spinifex, a low prickly or thorny bush, and with kangaroo grass, which is well suited to endure dry weather, as its roots lie dormant during the rainless season, and revive when the rains begin.

A few native trees are similar to those of other continents. Pines, cedars, ironwood, and others of the cool belts grow on the mountain sides, while palms of many kinds, figs, and bananas grow in the warmer parts of the continent. From the pines and cedars, and also from the native eucalyptus excellent timber is obtained.

Many cultivated plants have been introduced into Australia, and they grow as well there as in the other continents. Among them may be named wheat, maize, oranges, lemons, grapes, sugar-cane, cotton, and tobacco.

Animals. The continent of Australia and the large islands north, south, and south-east of it form a region of animal life in which are many

kinds not found anywhere else in the world. Nearly all are plant-eating, but none grow to a gigantic size like some in India and Africa.

The most remarkable four-footed animals of Australia are the kangaroo (Fig. 294), of which there are several varieties, the duckbill, and the echidna.

The giant kangaroo, the largest animal on the continent, is of about the same size as a deer, and has very short fore limbs, large, muscular hind ones, and a long, thick, powerful tail. It moves about by a series of great bounds, using only its hind legs and tail for the purpose. The female is provided with a pouch or fold of skin on the under side of her body in which she carries her young until they can take care of themselves. The animal lives in herds, feeds chiefly on grass, and is quiet and inoffensive except when forced to defend itself, when it becomes dangerous because



FIG. 294—Kangaroo, with young in pouch

of the strong claws on its hind feet. Its flesh is eaten, and its skin is made into leather.

There are other varieties of kangaroo, the smallest being the kangaroo rat, about as large as a rabbit. All have the pouch for the young, the large hind limbs and tail, and the small fore limbs.

The duckbill is about as large as a cat, and is covered with a glossy brownish fur. It resembles a duck in having a flat bill, webbed feet, and in laying eggs. The eggs are without shells, and about as large as robins' eggs. It burrows on the banks of streams, and lives on insects, worms, and small shell-fish.

The echidna is a small ant-eater. Its body is covered with spines or quills, and like the duckbill it lays eggs.

Among the birds of the continent are the emu and the cassowary, which resemble the ostrich in appearance and habits, and are hunted for their flesh and eggs, the apteryx, almost entirely destitute of wings, and the lyre-bird, with a tail resembling the ancient Greek lyre.

One kind of fish found in the rivers and lakes of Australia is the lung-fish, or mud-fish. It has both gills and a single lung with either of which alone it can breathe, and thus can live either in water or on land. It attains a length of six feet, and is good for food.

The only flesh-eating animals that need be named are the Tasmanian wolf, of which there are several varieties, and the fierce dingo, or wild dog.

But though this continent has many animals not found in any other country, it has also many that are found elsewhere. This is true with regard to birds, fish, reptiles, and insects. Wild geese and ducks, parrots, eagles, hawks, and owls are numerous. Mackerel, cod, mullet, and oysters are found along the coast, salmon have been introduced into the large rivers, and whales and seals are found in the southern waters not far away. There are alligators in some northern rivers, and snakes and lizards in all parts of the continent. Bees, locusts, and destructive white ants are abundant. Sheep, cattle, horses, and other domestic animals also have been introduced, and are owned in enormous numbers in the settlements. Rabbits

have become so numerous and destructive that a bounty is paid for their destruction.

Many of the islands around Australia and over the Pacific are of coral formation. A wall of coral rock, called the Great Barrier Reef (Fig. 295), runs parallel with the northern part of the eastern coast of Australia for more than a thousand miles, and is very dangerous to navigation.

History and People. Australia and Tasmania were visited by Dutch expeditions nearly three hundred years ago. So Australia received the name New Holland (Why?), and Tasmania was called Van Dieman's Land in honor

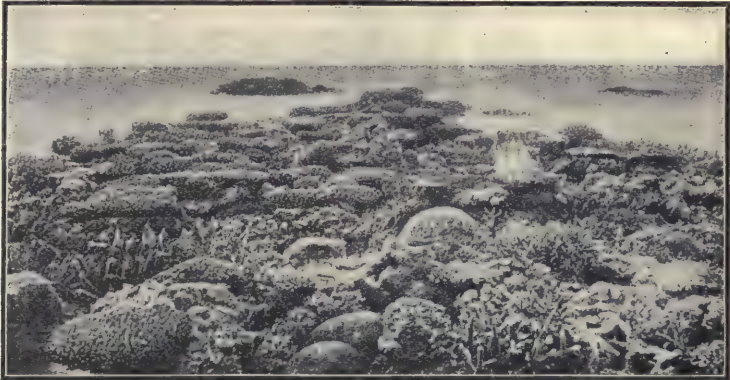


FIG. 295—Great Barrier Coral Reef, Australia

of the Governor of the Dutch East Indies. They were not highly valued by the Dutch, and more than one hundred years ago were taken possession of by the British under Captain Cook. Soon several convict settlements were established in both colonies, the earliest being at Botany Bay near the site of the present city of Sydney. The British changed the name of New Holland to Australia ("the Southern land"), and when Van Dieman's Land ceased to be a penal colony its name was changed to Tasmania (after Tasman its discoverer).

In 1851 gold was discovered in south-eastern Australia, and thousands of people flocked there. Since that time the colonies have rapidly advanced.

The early explorers of Australia found the continent peopled by wandering tribes of blacks (Fig. 296), very repulsive in appearance and degraded in habits. They lived by hunting, and were expert in the use of the *boomerang*, a curved stick about two feet long, which they could throw in such a way that it would whirl back to its starting place if it struck nothing.



FIG. 296—Group of Australian Natives

They were of very low mental ability (it is said they could not count above five), and contact with European settlers has not made them much more intelligent or cultured. They are rapidly disappearing, and probably do not now number more than twenty-five thousand. The aboriginal Tasmanians, who much resembled the native Australians in appearance and customs, have all disappeared; the last survivor died in 1876.

The total population of Australia and Tasmania is about 3,800,000. Where are the most densely settled parts? Account for the uneven distribution of the people. More than 95 per cent. of the people are of British descent, the remainder being chiefly Germans, Chinese, and aboriginal Australians.

Industries and Trade. The chief industries of the people are farming, stock-raising, mining, and commercial pursuits.

European grains, sheep, cattle, and horses have been introduced into the continent, and extensive grain and stock farms are conducted where the land is not desert or mountainous. The number of sheep in the continent is now considerably over one hundred millions. An average of five pounds of wool is obtained from each animal, and of this much more than half is exported to Great Britain, and forms one of the principal articles of export of the country. Cattle and horses may also be counted by millions.

The whole eastern range of mountains in both Australia and Tasmania is especially rich in minerals, the chief being gold, coal, and tin. Gold was discovered in south-eastern Australia in 1851, shortly after the great discovery in California, and Australia is now the largest gold producing country in the world. Many people have been attracted to the country by the mines, and large cities and towns have grown up in the mining regions.

The foreign trade consists chiefly of the exchange of products of the soil, stock farms, and mines for manufactured goods. It is carried on almost entirely with Great Britain and the United States. Frozen meat has become an important article of export; but by far the most valuable exports are those of gold and wool.

In October, 1902, a telegraphic cable was completed between Australia and Canada. Its route is from Brisbane, by way of Norfolk Island, the Fiji Islands, and Fanning Island, to Vancouver (all British possessions). Branches also are laid from Norfolk Island to New Zealand, from the Fiji to the Samoan Islands, and from Fanning Island to the Hawaiian Islands. Find all these places on the map.

Government—Subdivisions—Cities. Name and state the location of the five subdivisions of the continent. In the year 1900 they and the island of Tasmania united to form the Commonwealth of Australia, on a basis of government very similar to that of Canada. A House of Commons and a Senate, both elected by the people, a Governor-General advised by an Executive Council, and a Supreme Court controlled by the British Privy Council only in international and intercolonial affairs, are the main parts of the Federal Government. Each state has also its local legislature consisting of two elective houses, a lieutenant-governor, and a ministry. The small town of DALGETY in south-eastern New South Wales has been selected as the capital of the Commonwealth. What is the capital of each state?

Melbourne, on Port Philip, is the largest and most handsome city in Australia, and is more than twice the size of Toronto. Its streets are broad and lined with trees, its parks and gardens are numerous, and it has some magnificent public buildings. Its trade is very great, especially by sea, as it is connected by steamship and sailing lines with all important countries and ports of the world. *Ballarat* is a well-built city north-west of Melbourne in the district where gold was first discovered in the year 1851.

Sydney is the oldest city in Australia, and equal to Melbourne in population. It is situated on the south side of Port Jackson, an excellent natural harbor, and it claims to have the greatest trade of the cities of the Southern Hemisphere. It has a good university, its public buildings, cathedrals, churches, and many business blocks are imposing, and its parks and botanic gardens are very attractive. It is a British naval station, and the headquarters of the Australasian section of the fleet.

Brisbane, on the Brisbane River about twenty miles from its mouth, was at one time a British convict settlement, but is now a busy trade centre, with 125,000 people within a ten mile radius. It has some very fine public



FIG. 297—Outline Map of Australia and New Zealand

buildings. What are its submarine cable connections?

Adelaide, seven miles from St. Vincent Gulf, is regularly laid out and has many handsome buildings. It is connected by rail and river with *Port Adelaide*, its seaport, and the two places carry on a large inland and foreign trade. An overland telegraph also connects it with *Palmerston*, on Port Darwin, on the north coast of the continent, and thence to Singapore.

Perth is a flourishing city about seven miles from the mouth of the Swan River. *Fremantle* is an important seaport at the mouth of the same river.

Hobart, capital of Tasmania, is a well-built city on an excellent harbor. It has a large trade with Australian ports and with Great Britain.

British New Guinea. NEW GUINEA, OR PAPUA, is the largest island in the Eastern Hemisphere. Where is it situated? In what heat belt is it? What is the direction of its winds? Is the rainfall heavy or light? Are its forests dense or open? The climate is hot and wet, and not healthful. Many varieties of tropical products are raised, and there is some exportation of coffee and tobacco.

The Papuans are a degraded people with black skin and "frizzly" hair. They are, however, settling down to peaceful habits, and are being taught by Christian missionaries.

The south-eastern part of the island is British territory. It is a dependency of Australia; the expenses of its government are guaranteed by Queensland, New South Wales, and Victoria, and these colonies have a voice in its management. The capital is *Port Moresby*.

BRITISH AND OTHER ISLANDS IN THE PACIFIC

New Zealand. The islands of New Zealand are about one thousand miles east of Tasmania, across a sea that is often very stormy. Name the three islands of the group in the order of their position.

In general outline they are boot-shaped, like Italy, but with the toe pointing north-westwards. They are a little smaller than the British Isles, and less than half as large as the Province of Ontario, but they form one of the most flourishing colonies of the British Empire.

A range of mountains extends throughout the whole group, and these are more or less volcanic. Centuries ago all the islands were much more volcanic than now, and violent earthquakes frequently occurred. Middle Island is more elevated and mountainous than North Island.

About the centre of North Island is an area about 50 miles by 20 known as the Hot Springs District. In it are to be found active volcanoes, geysers, mud volcanoes, and openings in the ground which give out steam and poisonous gases.

What is the direction of the winds over New Zealand? On which side of the mountains, therefore, is there the heaviest rainfall? In what heat belt is New Zealand? What is the effect of the ocean upon the climate of the islands. In what months is it winter? Only high in the mountains do heavy snowfalls occur. The air is always mild, and a bouquet of wild flowers may be gathered any day in the year.

Much of the soil is fertile, and vegetation is luxuriant. Native pines, palms, and other timbers abound, and oak, elm, birch, willow, cypress, and fruit trees imported from

England flourish all over the country. All the ordinary grains and roots are grown and yield good crops.

The Kauri pine attains a height of 200 feet and a diameter at its base of 15 feet. It yields a gum that is used in the manufacture of varnish. But the strange fact is that what is obtained is not taken from the tree itself, but is dug out of the ground at a depth of five or six feet. This has accumulated from trees long dead and decayed. Fully 5,000 people are engaged in gathering it.

The native animal life of New Zealand is very limited. No fierce animals were ever found there, no snakes, no insect pests, no fish in the rivers, no game in the forests. Sheep and other farm animals have been introduced, and great quantities of wool and mutton are exported.

There are valuable mines of gold and coal. The latter support important manufactures, that of woollens being the chief. The principal foreign trade is with Great Britain.

The population is over 900,000, including about 50,000 Maoris, or natives. The Maoris (Fig. 298) were at one time cannibals, but they have become Christianized, and have been placed on reservations, of which the Hot Springs district is one. They are more intelligent than the Australian blacks, and some of them are quite cultured. They are of olive brown complexion, and the greater number of them tattoo their skin and have thick tangled hair. In general they are lazy and selfish, but not quarrelsome or treacherous.

There are four large cities in New Zealand, and through their ports the foreign trade of the colony is distributed about equally. *Auck-*



FIG. 298—A Maori Girl

land is the largest, and is the old capital. It is the most convenient port for Australian and American vessels, and it has a good harbor. The city is attractive with flowers and ornamental shrubbery. WELLINGTON has been selected as capital because of the convenience of its situation. *Christchurch* is the chief seat of the English Church in the colony. *Dunedin*, a hilly town, is adjacent to valuable gold mines. Which of these cities are in North Island, and which in Middle Island?

Many small British islands and island groups near New Zealand are under the administration of this colony.

New Zealand is sometimes called "The Britain of the South." What reasons would you suggest for giving it this name?

Fiji, and Other British Islands. With few exceptions the British islands scattered over the Pacific lie between the Tropic of Capricorn and the Equator. They all have, therefore, warm climate tempered by breezes from the sea, are visited by abundant rains, are more or less of coral formation, and have fertile soil yielding in profusion all manner of tropical fruits, spices, grains, and vegetables.

The FIJI group are the most important of these islands. The natives were formerly cannibals, but they have been Christianized, and several thousand Europeans now live among them. The capital is *Suva*, a port of call for steamships plying between Canada and Australia. The Governor of Fiji is also British High Commissioner of the Western Pacific.

The TONGA or FRIENDLY ISLANDS are about 400 miles south-east of Fiji. The natives are the most advanced of any in the islands of the Pacific, and are engaged in cultivating the vegetation of the islands, and in fishing.

The BRITISH SOLOMON ISLANDS lie north-west of Fiji. They came under British protection in 1899 by treaty with Germany.

NORFOLK and PITCAIRN ISLANDS are both south of the tropic of Capricorn. In 1790 the crew of the British vessel *Bounty* mutinied and took refuge in Pitcairn Island (about 2 square miles), nearly 5,000 miles east of Australia, where they settled as a peaceable community. In 1856, being

too numerous for the island, they were transferred to Norfolk Island (13½ square miles), about 800 miles from Australia, where their descendants now make up two-thirds of the population. Forty afterwards returned to Pitcairn, and in 1890 the inhabitants of the latter numbered 126, employed chiefly in fishing and farming.

There are also numerous scattered islands and groups of islands in the Pacific, which are British possessions or are under the protectorate of Britain—the *Gilbert* and *Ellice* groups and *Phoenix Islands* and others. *Fanning Island*, nearly on the Equator and south of the Hawaiian Islands, is a station for the Pacific Cable between Canada and Australia.

Other Islands in the Pacific Ocean. Besides the islands belonging to Great Britain, there are also many which belong to other countries.

THE HAWAIIAN ISLANDS, a mountainous group in the central Pacific, constitute a Territory of the United States. The volcano Mauna Loa is said to be the largest active one in the world. The climate is mild and healthful, and there is much fertile soil. Sugar, coffee, tropical fruits, and early garden vegetables are the chief products. The population in 1900 was 154,001, made up of natives, Chinese, Japanese, and whites. The islands were formerly an independent kingdom, and were called the Sandwich Islands, but were annexed by the United States in 1898, and are now a territory of the Union. The beautiful city of *Honolulu* is the capital, the centre of a very large foreign trade, and a port of call for vessels crossing the Pacific.

Guam, the principal island in the Ladrone group, belongs also to the United States.

New Caledonia with valuable nickel mines, and the adjacent islands, the *Society* and other islands belong to France.

The *Solomon Islands*, *Bismarck Archipelago*, *Samoa*, *Marshall*, *Caroline*, *Ladrone*, and other island groups, wholly or in part, belong to Germany.

THE BRITISH EMPIRE

Extent. The British Empire consists of the United Kingdom of Great Britain and Ireland and a large number of colonies and protectorates in all parts of the world.

The total area, exclusive of Egypt and the Anglo-Egyptian Sudan, is more than eleven million square miles, so that the empire is nearly equal in extent to the whole continent of Africa. The largest possessions in order of size are (i) Canada, (ii) Australia, (iii) India, (iv) Central and Southern Africa.

The population is almost four hundred millions, or a little more than that of all Europe. What fraction is this of the population of the world? Amongst all these people the diversity of race, color, nationality, and language is very great—it has been said that the British national anthem is sung in twenty different languages.

The British Empire is the largest in the world in both extent and population. In wealth, commerce, and naval power also it surpasses every other nation. Its merchant vessels exceed in capacity the combined shipping of all the other great maritime countries of the world, and the aim of its statesmen is to keep its navy “superior in power and equal in numbers to the fleets of any two other countries.” Why does Great Britain require such a powerful navy?

Name the chief British possessions in (i) Europe, (ii) America, (iii) Asia, (iv) Africa, (v) Australia and the Pacific Ocean.

Two hundred years ago the British possessions numbered a bare half-dozen small settlements in Africa and America. Those in Africa afforded a profitable trade in gold dust and slaves, and those in America were settlements of English people who left the mother country chiefly because of religious troubles.

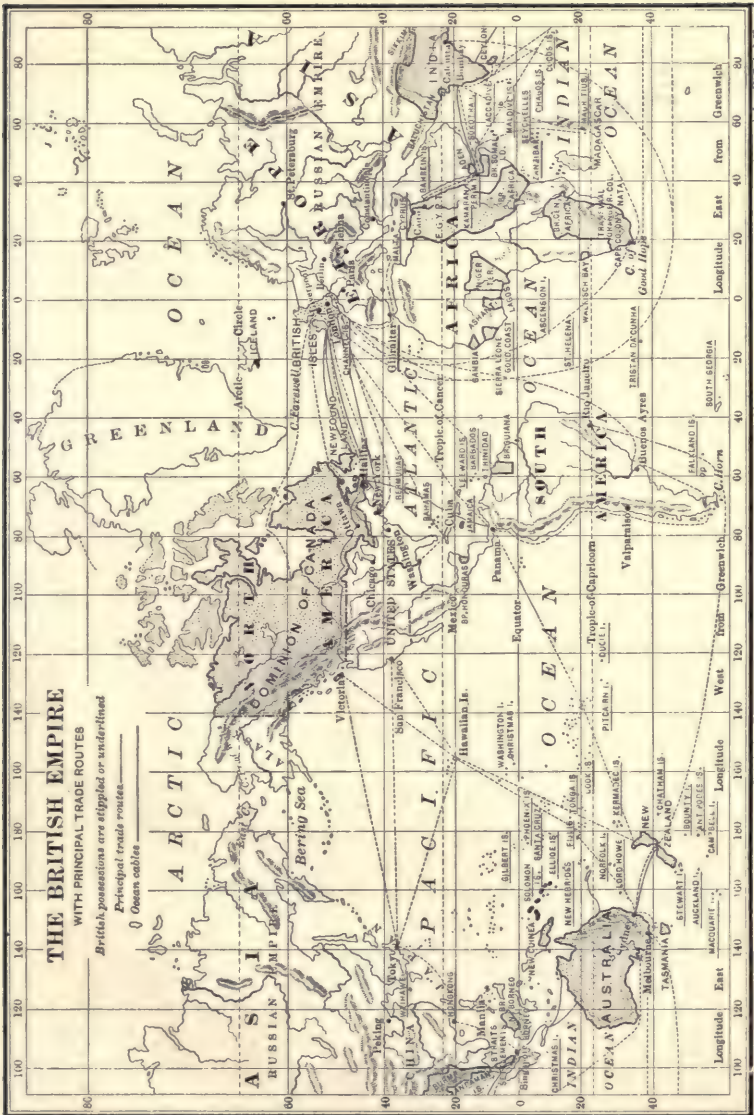
THE BRITISH EMPIRE

WITH PRINCIPAL TRADE ROUTES

British possessions are stippled or underlined

Principal trade routes

Ocean cables



In 1704 Gibraltar was taken from Spain, and nine years afterwards Newfoundland, Labrador, and the Atlantic Provinces of Canada were obtained from France by the Treaty of Utrecht. By the Treaty of Paris, in 1763, the remainder of Canada and parts of India were added to the Empire. The settled country in Canada obtained by the latter treaty consisted of only a narrow strip on the St. Lawrence River.

In the meantime several British colonies on the Atlantic coast of North America had grown large and important. A quarrel with the mother country about taxation caused these colonies to declare their independence in 1776, and after a severe war they became the Republic of the United States of America.

Almost immediately after the loss of the American colonies, parts of Australia, which only shortly before had been explored by Captain Cook, were occupied by the British, and used as convict settlements. Out of these grew the Australian Commonwealth, now so prosperous because of its gold mines, and sheep and cattle ranches.

During the nineteenth century the Empire became widely extended. Vast regions in eastern, central, and southern Africa were acquired; British rule in India was much extended by conquest; the Australian continent was colonized; and the wealth and importance of Canada were greatly increased by settling the new lands in the west by people from the eastern Provinces and from Europe.

Government. The Kingdom of Great Britain and Ireland is a Limited Monarchy. The King is at the head of the realm, and is advised by a Cabinet. The Parliament consists of two houses, the House of Commons and the House of Lords. Who is the present Prime Minister?

The Cabinet has from fifteen to twenty members (the number is variable), the House of Commons 670, and the House of Lords about 590 (this number also is variable).

The colonies of the Empire, with the exception of India, are under the control of the Secretary of State for the Colonies, who is a Cabinet minister. Indian affairs are under the management of a minister known as the Secretary of State for India.

The more important colonies, such as Canada, Australia, Cape Colony, Natal, and New Zealand are self-governing, with governments responsible to the people. The first two are each represented in London by High Commissioners who look after the political and commercial interests of their country. Find who is the present Canadian

High Commissioner. British Guiana, the British West Indies, Malta, and other colonies have partly responsible government—members nominated by the Governor sit in parliament with representatives elected by the people.

Crown Colonies are under the administration of officers appointed directly by the British Government, and the people are not represented in any form of parliament. Gibraltar, Hong Kong, and Sierra Leone are examples. India is really a Crown Colony, though it is usually spoken of as the Indian Empire, and the King as Emperor of India.

Protectorates generally have their own kings or chiefs, but these hold office with the permission of, and under the direction of, the British Government.

The British People. Two thousand years ago the British Isles were peopled by tribes of Britons and Gaels, the former in England, the latter in Scotland and Ireland. You may read in your History how the Romans, Anglo-Saxons, Danes, and Normans successively occupied the country. To-day the British people both in the homeland and throughout the colonies are mainly of Anglo-Saxon origin.

The whole British nation, however, is composed of a great variety of peoples and tribes. The White Race is represented by the Anglo-Saxons in all parts of the Empire. The Yellow Race is represented by the Eskimos of Labrador and northern Canada, the Malays of the East Indies, and the Chinese of Hong Kong. The Black Race is represented by the many native tribes of Africa and Australia.

The English language is heard in all parts of the world. Strange to say, the greater number of those who speak it are outside the Empire, and the great majority of those in the Empire do not use it. Of the 130 millions who speak English nearly eighty millions live in the United States.

Of the 400 millions of people in the Empire only about fifty-five millions use the national language. English-speaking people control nearly one-third of the land surface of the world and also nearly one-third of its population.

British Commerce. The growth of the British Empire in all parts of the world has been accompanied by a corresponding growth of British commerce. Each colony contributes more or less of its products to the support of the people of the mother country, and takes part of their manufactures. What do the British obtain from Canada, the West Indies, Australia, South Africa, India, Singapore, Hong Kong? The union under a common flag of many possessions having a great diversity of resources has led to an increasing intercolonial trade. British vessels also do much carrying of goods to and from foreign countries. The total tonnage of British and colonial vessels (merchantmen) is about 17 million tons, exclusive of small vessels under 100 tons.

Some of the main routes for British commerce may be studied from the map of the British Empire. Name the chief commercial centres of the Empire—three or four in the British Isles, three or four in Canada, two or three in India, one in the East Indies, one in China, one in South Africa, and two in Australia. In what way did the construction of the Suez Canal benefit British commerce?

During very long voyages steamships have to renew their supply of coal. Where in British territory can vessels in the North Pacific get coal? In the South Pacific? In the North Atlantic? Some of the small British islands in the South Pacific and Atlantic are used as "coaling stations." Enormous quantities of coal are brought to them and also to Suez and Aden and to Punta Arenas in the Strait of Magellan, and stored for use of merchantmen and ships of war.

British trade is aided by telegraph lines and submarine cables which join various points over the whole Empire. Name an important cable route in the Atlantic, and another in the Pacific.

All the large colonies have numerous railways. In what way is the Canadian Pacific Railway valuable to the Empire? What British transcontinental railway is projected in Africa?

Defences of the Empire. The British Empire is essentially a naval power. A strong fleet must be maintained to protect the shores of the mother country, the many trade routes, and the numerous colonies.

The Royal Navy is under the control of the Board of Admiralty, which consists of the First Lord of the Admiralty, who is always a member of the Cabinet, and five commissioners. It comprises nearly four hundred effective vessels of all kinds, and of these seventy are very large iron-clad battleships. The number of men in active service in the navy is more than 125,000. "Squadrons," or small subdivisions, of the navy are kept at "naval stations" in various parts of the world, ready to sail on short notice to any place to which they may be ordered. "Every ocean is policed by British men-of-war." The home fleet and Mediterranean squadron are the largest. Two are stationed in the vicinity of Canada, one at Halifax in summer and the Bermudas in winter, and the other at Esquimalt in Vancouver Island.

The British Army is under the management of the Secretary of State for War, who is a Cabinet minister. The regular army numbers a little less than 200,000, part of it being distributed as "garrisons" among the colonies. Reserves, volunteers, the regular forces in India (about 75,000) and others, bring the total number of officers and men up to nearly 900,000. The chief garrisons, in order of size, are at the following colonies and fortresses: Gibraltar, Malta, Sierra Leone, Cape Town, Natal, Mauritius, Aden, Ceylon, Singapore, Hong Kong, Halifax, Bermudas, Jamaica, and Barbados. The strongest fortress is at Gibraltar, and others nearly impregnable are at Malta, Aden, Trincomalee, Singapore, Hong Kong, Esquimalt, Quebec, and Halifax.

British and Colonial Flags. The national flag of the British Empire is the "Union Jack." Its length is twice its breadth, and it is made up of a blue "ground" bearing several crosses. The large red St. George's cross with white border represents England; the white St. Andrew's cross extending from corner to corner represents Scotland; and the red St. Patrick's cross resting on the latter represents Ireland. This has been the national flag since January 1st, 1801.

The standard used by the British Army is the Union Jack covering the whole flag.

In the British Navy several kinds of flags are displayed. The White Ensign floats upon every man-of-war in actual service, the Blue Ensign upon reserve and other government vessels, and the Red Ensign upon merchant vessels.

The Royal Standard is a flag displayed on the occasion of public appearance of members of the royal family of Great Britain and floated over the building occupied by the King or his royal representative, or over the vessel in which he may be sailing. In it are represented the three countries making up the British Isles—England by two groups of three lions each in two quarters diagonally opposite each other, Ireland by the harp in the lower quarter next the mast, and Scotland by the single lion in the remaining quarter.

The colonial flags in most cases have the Union Jack in the upper corner next the flagstaff, and the badge of the colony in a prominent position in the "fly" or outer portion of the flag.

The British Coat of Arms. Hundreds of years ago when knights and noblemen went to battle clad in complete armor, the king allowed them to have painted on their shields, or worked on the mantle worn over their armor, a badge by which they might be known. This was called their "armorial bearing" or their "coat of arms." At a later date these armorial bearings became family decorations and were placed on various household or personal articles, such as carriages, furniture, and clothing.

At the present time the use of all devices or crests of this kind is regulated by the Heralds' College, a body of some fifteen or twenty officials appointed by the Government for this particular work. The royal and noble families of the kingdom use armorial bearings for which a license fee must be paid.

The coat of arms of the British Government is used on all parliamentary papers, and in many other ways, as the badge of imperial authority. It consists of a shield on which is quartered the same device representing England, Scotland, and Ireland as is on the royal standard. Surmounting this is a crown on which stands a small lion, and on the sides are two "supporters," at the left a large lion, and at the right a fabulous animal known as the unicorn. There are two mottoes in this device, one close to and surrounding the shield, meaning "Evil be to him who evil thinks," and one on a scroll underneath, meaning "God, and my right."

Occasionally the shield, without crown, supporters of mottoes, is used as the armorial bearing to represent Great Britain.

APPENDIX

Most of the figures are obtained from the "Statesman's Year Book" for 1904, and "Whitaker's Almanac" for 1905.

THE SOLAR SYSTEM

Name.	Distance from Sun in miles.	Diameter in miles.	Time of Revolution.	Number of Satellites.
Sun	867,000	26 days	..
Mercury	37,750,000	2,992	88 "	..
Venus	66,750,000	7,660	224 "	..
Earth	92,300,000	7,918	365½ "	1
Mars	141,000,000	4,211	1.9 years	2
Asteroids	250,000,000	20-300	3-8 "	..
Jupiter	480,000,000	86,000	11.8 "	7*
Saturn	881,000,000	70,500	29.5 "	9†
Uranus	1,771,000,000	31,700	84 "	4
Neptune	2,775,000,000	34,500	164 "	1

CONTINENTS AND PRINCIPAL COUNTRIES

	Area in sq. miles.	1905	Population.
NORTH AMERICA	8,588,820	1905	110,000,000
United States (with Alaska and Hawaii)	3,622,933	1900	76,303,387
Mexico	767,005	1900	13,545,462
Canada	3,745,574	1901	5,371,315
Central America	215,877	1897	4,540,000
SOUTH AMERICA	7,523,970	1897	40,000,000
Brazil	3,218,166	1890	14,333,915
Argentina	1,212,000	1903	5,102,248
Chili	290,829	1900	3,160,000
EUROPE	3,850,000	1897	375,000,000
Russia	2,095,616	1897	106,159,140

*Two reported as discovered in 1905—reports to be yet confirmed.

†Also two rings of nebulous or gaseous matter surrounding the planet.

CONTINENTS AND PRINCIPAL COUNTRIES

Continued

	Area in sq. miles.		Population.
German Empire	208,830	1900	56,345,014
Austria-Hungary	240,942	1900	47,013,835
France	204,092	1901	38,641,333
British Isles	121,377	1901	41,454,621
Italy	110,646	1900	32,100,000
Spain	197,670	1897	18,089,500
Turkey in Europe	66,500	1901	6,086,300
ASIA (with Islands)	17,278,390	1897	831,503,529
Chinese Empire	4,468,750	1897	303,241,969
India	1,700,000	1901	294,266,701
Japan (including Southern Sakhalin)	185,155	1896	44,263,160
Turkey in Asia	680,000	1900	16,333,000
Russia in Asia	6,369,685	1897	23,051,972
AFRICA	11,508,793	1897	170,000,000
Congo Free State	900,000	1898	14,000,000
Egypt	400,000	1897	9,734,405
Cape Colony	277,077	1891	1,527,224
Natal	35,019	1900	929,970
Orange River Colony	48,326	1890	207,503
Transvaal Colony	119,109	1896	867,897
Rhodesia	750,000	1898	1,350,000
AUSTRALASIA	3,077,547	1901	4,604,130
Commonwealth of Australia	2,973,076	1901	3,788,310
New South Wales	310,700	1901	1,366,408
Victoria	87,884	1901	1,200,914
Queensland	668,497	1900	498,249
South Australia	903,690	1901	362,604
Tasmania	26,385	1901	172,475
Western Australia	975,920	1901	187,660
New Zealand	104,471	1901	815,820

SIZE OF THE EARTH

LENGTH OF THE EARTH'S POLAR DIAMETER (miles)	7,901
LENGTH OF THE EARTH'S EQUATORIAL DIAMETER (miles)	7,926
LENGTH OF THE EQUATOR (miles)	24,912
THE EARTH'S SURFACE (square miles)	196,940,000

THE OCEANS

	Area in square miles.	Average depth in fathoms.	Greatest depth in fathoms.
Pacific	70,000,000	2,500	5,200
Atlantic	34,000,000	2,000	4,651
Indian	27,500,000	2,000	
Antarctic	7,500,000		
Arctic	5,000,000		

AREA AND POPULATION OF CANADA—1901

DOMINION OF CANADA	3,745,574	5,371,315
British Columbia	383,300	178,657
Manitoba	73,956	255,211
New Brunswick	28,200	331,120
Nova Scotia	20,600	459,574
Ontario	222,000	2,182,947
Prince Edward Island	2,000	103,259
Quebec	347,350	1,648,898
Saskatchewan	250,000	165,555
Alberta	250,000	
Unorganized Territories (area of Franklin estimated at 700,000)	2,168,168	46,094

POPULATION OF THE PRINCIPAL CANADIAN CITIES
AND TOWNS—1901

Montreal*	267,730	Hull	13,993
Toronto†	208,040	Windsor, Ont.	12,153
Quebec	68,840	Charlottetown	12,080
Ottawa	59,928	Sherbrooke	11,765
Hamilton	52,634	Guelph	11,496
Winnipeg‡	42,340	St. Thomas	11,485
Halifax	40,832	Peterboro'	11,239
St. John	40,711	Valleyfield	11,055
London	37,981	Ste. Cunegonde	10,912
Vancouver	26,133	Three Rivers	9,981
St. Henri	21,192	Stratford	9,959
Victoria	20,816	St. Catharines	9,946
Kingston	17,961	Sydney	9,909
Brantford	16,619		

*In 1905, with suburbs, over 325,000

†In 1905, with suburbs, about 250,000

‡In 1904, over 70,000

POPULATION OF THE PRINCIPAL CANADIAN CITIES
AND TOWNS--1901--*Continued*

Berlin	9,747	Dartmouth	4,806
St. Hyacinthe	9,210	North Sydney	4,646
Dawson	9,142	Ingersoll	4,573
Belleville	9,117	Fraserville	4,569
Chatham, Ont.	9,068	New Glasgow	4,447
Moncton	9,026	Oshawa	4,394
Brockville	8,940	Niagara Falls*	4,244
Westmount	8,856	Cobourg	4,239
Woodstock	8,833	Joliet	4,220
Owen Sound	8,776	Trenton	4,217
Sarnia	8,176	Port Hope	4,188
Galt	7,866	Goderich	4,158
Levis	7,783	Calgary	4,152
Sault Ste. Marie	7,169	Hawkesbury	4,152
Fredericton	7,117	Arnprior	4,150
Sorel	7,057	Petrolea	4,135
Lindsay	7,003	Carleton Place	4,059
Glacé Bay	6,945	St. John's, Que.	4,030
Cornwall	6,704	Maisonneuve	3,958
New Westminster	6,499	Portage la Prairie	3,901
Yarmouth	6,430	Chicoutimi	3,826
Rossland	6,159	Granby	3,773
Nanaimo	6,130	Pictou	3,698
Toronto Junction	6,091	Fort William	3,633
Truro	5,993	St. Jerome	3,619
Barrie	5,949	Perth	3,588
Collingwood	5,755	Waterloo	3,537
Lachine	5,561	Deseronto	3,527
Brandon	5,380	Gananoque	3,526
Nelson	5,273	Magog	3,516
Kenora	5,202	Lauzon	3,416
Spring Hill	5,178	Windsor, N.S.	3,398
Pembroke	5,156	St. Marys	3,384
Smith's Falls	5,155	Kingsville, Que.	3,256
Amherst	4,963	Pictou	3,235
Orillia	4,907	Paris	3,229
Chatham, N.B.	4,868	Port Arthur	3,214

*In 1904, over 8,500

POPULATION OF THE PRINCIPAL CANADIAN CITIES
AND TOWNS—1901—*Continued*

Sydney Mines	3,191	Longueuil	2,835
Midland	3,174	Hintonburg	2,798
Dundas	3,173	Wallaceburg	2,763
Renfrew	3,153	Brampton	2,748
Napanee	3,143	Bowmanville	2,731
Farnham	3,114	Shawenegan	2,730
Almonte	3,023	Parrsboro	2,705
Prescott	3,019	Listowel	2,693
Woodstock, N.B.	2,984	Campbellton	2,652
Walkerton	2,971	Regina	2,645
Buckingham	2,936	Simcoe	2,627
Strathroy	2,933	Edmonton	2,626
Lunenburg	2,916	Clinton	2,547
Parry Sound	2,884	North Bay	2,530
Coaticook	2,880	Grand Mere	2,511
Summerside	2,875	Orangeville	2,511
St. Stephen	2,840	Newcastle	2,507

SOME OF THE LARGEST CITIES OF THE WORLD

	Population
1. London, England, 1902, "Greater London"	6,705,731
2. New York, United States, 1903	3,732,905
3. Paris, France, 1903	2,660,550
4. Canton, China	2,500,000
5. Berlin, Germany, 1903	1,931,701
6. Chicago, United States, 1903	1,885,000
7. Vienna, Austria-Hungary, 1903	1,761,931
8. Tokio, Japan, 1900	1,507,557
9. Philadelphia, United States, 1903	1,378,624
10. St. Petersburg, Russia, 1903	1,333,600
11. Osaka, Japan, 1900	1,311,763
12. Moscow, Russia, 1902	1,173,427
13. Calcutta, India, 1901	1,125,400
14. Constantinople, Turkey, 1902	1,125,000
15. Peking, China, Estimated	1,000,000
16. Kioto, Japan, 1900	931,568
17. Glasgow, Scotland, 1903	879,406
18. Hankau, China, 1901	850,000
19. Rio de Janeiro, Brazil, 1903	793,000

SOME OF THE LARGEST CITIES OF THE WORLD

Continued

	Population
20. Buda-Pesth, Austria-Hungary, 1903	790,529
21. Manchester, England, 1903	779,966
22. Bombay, India, 1903	776,006
23. Buenos Aires, Argentina, 1903	753,000
24. Hamburg, Germany, 1903	747,004
25. Liverpool, England, 1903	743,507
26. Hangchau, China, 1898	700,000
27. Tientsin, China, 1898	700,000
28. Fuchau, China, 1897	650,000
29. Warsaw, Poland, 1897	638,209
30. Cairo, Egypt, 1903	624,338
31. St. Louis, United States, 1903	623,000
32. Shanghai, China, 1901	620,000
33. Boston, United States, 1903	600,928
34. Brussels, Belgium, 1903	575,896
35. Naples, Italy, 1901	563,540
36. Amsterdam, Holland, 1903	542,675
37. Madrid, Spain, 1900	539,835
38. Birmingham, England, 1903	533,039
39. Barcelona, Spain, 1900	533,000
40. Baltimore, United States, 1903	533,000
41. Munich, Germany, 1903	515,000
42. Milan, Italy, 1903	514,869
43. Sydney, Australia, 1903	511,030
44. Madras, India, 1903	509,364
45. Melbourne, Australia 1903	502,610
46. Rome, Italy, 1901	462,783

OTHER IMPORTANT CITIES

	Population
Aberdeen, Scotland, 1903	160,780
Adelaide, Australia, 1903	168,066
Agra, India, 1901	188,022
Alexandria, Egypt, 1903	349,310
Antwerp, Belgium, 1903	281,376
Athens, Greece, 1896	111,486
Auckland, New Zealand, 1901	67,226
Bahia, Brazil, 1890	174,412
Basle, Switzerland, 1901	113,000

OTHER IMPORTANT CITIES—*Continued*

	Population
Belfast, Ireland, 1903	349,180
Benares, India, 1901	209,331
Berne, Switzerland, 1900	64,064
Bordeaux, France, 1901	257,638
Bradford, England, 1903	283,412
Bremen, Germany, 1901	163,297
Breslau, Germany, 1903	439,022
Brisbane, Australia, 1903	124,463
Bristol, England, 1903	338,895
Buffalo, United States, 1900	352,387
Cape Town, Cape Colony, 1904	170,083
Cardiff, Wales 1903	172,598
Cawnpore, India, 1901	197,170
Christiania, Norway, 1903	224,600
Cincinnati, United States, 1900	325,902
Cleveland, United States, 1900	381,768
Cologne, Germany, 1901	372,529
Colombo, Ceylon, 1903	164,876
Copenhagen, Denmark, 1903	417,000
Damascus, Turkey, 1903	225,000
Delhi, India, 1901	208,575
Detroit, United States, 1900	285,704
Dresden, Germany, 1903	491,600
Dublin, Ireland, 1903	375,350
Dundee, Scotland, 1903	162,805
Edinburgh, Scotland, 1903	327,441
Florence, Italy, 1901	205,589
Frankfort, Germany, 1901	288,989
Geneva, Switzerland, 1901	105,000
Genoa, Italy, 1901	234,710
Georgetown, British Guiana, 1891	53,176
Hanover, Germany, 1901	235,649
Havana, Cuba, 1899	235,981
Havre, France, 1901	130,196
Hobart, Australia, 1903	34,917
Hull, England, 1903	249,639
Hyderabad, India, 1901	448,466
Jerusalem, Turkey in Asia, 1902	42,000
Johannesburg, Transvaal Colony, 1904	158,580
Kimberley, Cape Colony, 1904	34,331

OTHER IMPORTANT CITIES—*Continued*

	Population
Kingston, Jamaica, 1891	46,542
Leeds, England, 1903	443,559
Leicester, England, 1903	220,272
Leipzig, Germany, 1901	456,124
Lille, France, 1901	210,696
Lima, Peru, 1903	130,000
Lisbon, Portugal, 1900	365,009
Lodz, Russia, 1903	351,570
Louisville, United States, 1900	204,731
Lucknow, India, 1901	264,049
Lyon, France, 1901	459,099
Mandalay, Burma, 1901	182,488
Manila, Philippines, 1903	219,928
Marseille, France, 1901	491,161
Mecca, Turkey in Asia, 1885	60,000
Mexico, Mexico, 1900	368,777
Milwaukee, United States, 1900	285,315
Minneapolis, United States, 1900	202,718
Montevideo, Uruguay, 1904	284,794
Newcastle, England, 1903	222,241
New Orleans, United States, 1903	310,000
Nottingham, England, 1903	245,985
Odessa, Russia, 1903	449,673
Palermo, Italy, 1901	309,694
Perth, West Australia, 1903	46,400
Pittsburg, United States, 1900	321,616
Portland, Maine, United States, 1900	50,145
Prague, Austria-Hungary, 1903	422,381
Rangoon, Burma, 1901	234,881
Riga, Russia, 1897	256,197
Rochester, United States, 1900	162,608
Rome, Italy, 1903	491,074
Rotterdam, Holland, 1903	349,267
St. John's, Newfoundland, 1898	31,142
St. Paul, United States, 1900	163,065
San Francisco, United States, 1903	410,000
Santiago, Chile, 1900	320,000
Seoul, Korea, 1900	200,000
Sheffield, England, 1903	425,528
Singapore, Straits Settlements, 1901	228,555

OTHER IMPORTANT CITIES—*Continued*

	Population
Southampton, England, 1903	110,120
Smyrna, Turkey, 1898	201,000
Stockholm, Sweden, 1903	307,306
Teheran, Persia, 1897	210,000
The Hague, Netherlands, 1903	223,940
Trieste, Austria-Hungary, 1903	185,524
Turin, Italy, 1903	335,656
Valparaiso, Chile, 1900	143,000
Venice, Italy, 1903	153,359
Vera Cruz, Mexico, 1900	24,085
Victoria and Island of Hong Kong, China, 1901	283,905
Washington, United States, 1900	278,718
Wellington, New Zealand, 1901	49,344
Yokohama, Japan, 1898	193,762
Zürich, Switzerland, 1898	151,983

HEIGHT OF A FEW MOUNTAIN PEAKS

	Feet
Mt. Everest, Himalaya Mountains, Asia	29,002
Aconcagua, Andes Mountains, Chile	22,860
Mt. McKinley, Alaskan Mountains, Alaska	20,464
Mt. Logan, Coast Ranges, Yukon Territory	19,500
Mt. Elburz, Caucasus Mountains, Russia	18,200
Orizaba, Sierra Madre, Mexico	18,314
Mt. St. Elias, Coast Ranges, Alaska	18,100
Mt. Blanc, Alps Mountains, Switzerland	15,781
Mt. Whitney, Sierra Nevada Mountains, United States	14,898
Mt. Rainier, Cascade Mountains, United States	14,526
Mt. Shasta, Cascade Mountains, United States	14,380
Pike's Peak, Rocky Mountains, United States	14,108
Mauna Loa, Hawaiian Islands	13,675
Fremont Peak, Rocky Mountains, United States	13,790
Fujiyama, Japan	12,365
Mt. Cook, New Zealand	12,349
Mt. Sir Donald, Selkirk Range, British Columbia	10,662
Mt. Stephen, Rocky Mountains, British Columbia	10,425
Loma Tina, Haiti	10,300
Mt. Mitchell, Appalachian Mountains, United States	6,711
Mt. Washington, White Mountains, United States	6,293
Mt. Marcy, Adirondacks, United States	5,344

SOME OF THE LARGEST RIVERS IN THE WORLD

Name	Country	Length in Miles	Basin Area	Ocean
Missouri-Mississippi	United States	4,300	1,257,000	Atlantic
Nile	Africa	3,400	1,273,000	Mediter.
Amazon	South America	3,300	2,500,000	Atlantic
Obi	Siberia	3,200	1,000,000	Arctic
Yangtse	China	3,200	548,000	Pacific
Kongo	Africa	2,900	1,200,000	Atlantic
Lena	Siberia	2,800	950,000	Arctic
Hoang-Ho	China	2,700	570,000	Pacific
Niger	Africa	2,600	563,300	Atlantic
Plata	South America	2,580	1,200,000	Atlantic
Volga	Russia	2,400	563,300	Caspian
St. Lawrence	Canada	2,200	519,000	Atlantic
Mackenzie	Canada	2,000	590,000	Arctic
Yukon	Alaska	2,000	440,000	Pacific
Indus	India	1,800	372,700	Indian
Danube	Europe	1,770	300,000	Atlantic
Ganges	India	1,500	440,000	Indian

THE GREAT LAKES OF THE WORLD

Name	Length in Miles	Breadth in Miles	Area in Square Miles	Country
Caspian	680	270	169,000	Russia
Superior	390	160	31,200	Canada and U.S.
Victoria Nyanza	230	220	30,000	Africa
Aral	225	185	26,900	Asiatic Russia
Michigan	335	85	20,000	United States
Huron	250	100	17,400	Canada and U.S.
Tanganyika	420	50	12,650	Africa
Baikal	397	45	12,500	Siberia
Erie	250	58	10,000	Canada and U.S.
Winnipeg	275	60	9,000	Canada

Chad (a shallow lake which grows
very large in the rainy season
and shrinks in the dry season)

about 10,000

APPROXIMATE AVERAGE HEIGHT OF SOME
PLATEAUX

	Feet
Tibet	10,000-15,000
Bolivia	10,000-13,000
Abyssinia	5,000- 7,000

APPROXIMATE AVERAGE HEIGHT OF SOME
PLATEAUX—*Continued*

	Feet
Mexico	5,000- 6,000
Western United States Plateau	5,000- 6,000
Spain	2,000- 3,000
Brazil	2,000- 2,500
Laurentian	500- 2,000

THE BRITISH EMPIRE

In Europe

Possession.	Capital.	Government.	Area in S. Miles.	Population.	Date of Acquisition.
The United Kingdom of Gt. Britain & Ireland.....	London.....	L'd Monarchy	120,677	41,456,953
Isle of Man.....	Douglas.....	Self-governing.	227	54,758	1263
Channel Islands.....	{ St. Helier ... St. Pierre ..	"	75	95,841	1066
Gibraltar.....		Cr. Colony....	2	27,460	1704
Maltese Islands... .	Valetta.....	Self-governing.	117	188,141	1800

In Asia

Indian Empire and Protected States, Calcutta.....		Cr. Colony & Protectorates..	1,766,797	294,361,056	1757-1895
Ceylon and Dependencies.....	Colombo.....	Crown Colony.	25,365	3,770,562	1796
Singapore.....	Singapore.....	"	206	228,555	1819
Penang, Wellesley, etc.....	Georgetown... .	"	395	248,207
Malacca.....	Malacca.....	"	659	95,487	1824
Fed. Malay States.. (Various).....		Protectorate...	26,500	676,138	1874-1895
Cyprus.....	Nicosia.....	"	3,584	237,022	1878
Aden.....	Aden.....	To Bombay... .	75 }	43,974 {	1839
Perim I.....		To Aden.....	5 }		1857
Sokotra.....		"	1,382	12,000	1876
Kuria Muria Is.....		"	5.....		
Bahrein Is.....	Moharek.....	"	200	22,000	1867
Hong Kong.....	Victoria.....	Crown Colony.	407	386,159	1841, 1898
Wei-Hai-Wei.....		"	285	150,000	1898
Labuan.....	Victoria.....	"	30	8,411	1846
British N. Borneo.. Sandakan.....		Protectorate... .	31,106	175,000	1881
Brunei.....	Brunei.....	"	15,000	45,000	1888
Sarawak.....	Kuching.....	"	50,000	600,000	1842-1890

In Africa

Gambia.....	Bathurst.....	Crown Colony.	69	13,456	1588
Gambia.....		Protectorate... .	4,500	76,9480
Sierra Leone.....	Freetown.....	Crown Colony	4,000	76,655	1787

THE BRITISH EMPIRE—Continued

Possession.	Capital.	Government.	Area in S. Miles.	Population.	Date of Acquisition.
Sierra Leone.....		Protectorate...	30,000	1,000,000	1896
Gold Coast.....	Akra.....	Crown Colony.	71,300	1,486,433	1618
(includ. Ashantiland)					
Lagos.....	Lagos.....	"	3,460	1,500,000
Lagos.....		Protectorate...	25,450		
Nigeria, Southern.....		"	48,000	25,000,000	1884
Nigeria, Northern..	Calabar.....	"	320,000		
Cape Colony.....	Cape Town...	Self-governing.	276,995	2,405,552	1806
Natal.....	Pieterm'tzburg	"	35,306	1,039,787	1843
Basutoland.....	Maseru.....	Crown Colony.	10,293	348,706	1868
Transvaal.....	Pretoria.....	"	111,196	1,268,716	1902
Orange River.....	Blœmfontein..	"	48,400	385,045	1902
Bechuanaland....	Serowe.....	Protectorate...	275,000	120,776	1885
Rhodesia.....	Salisbury.....	"	394,000	1,250,000	1888
Somaliland.....		"	68,000	300,000	1884
East Africa.....	Mombasa.....	"	280,000	4,000,000	1895
Uganda.....	Entebbe.....	"	140,000	2,500,000	1894
Zanzibar & Pemba.	Zanzibar.....	"	1,020	250,000	1890
Central Africa....	Zomba.....	"	42,217	737,500	1891
St. Helena.....	Jamestown...	Crown Colony.	47	3,342	1673
Ascension.....	Georgetown...	"	38	460	1815
Mauritius Islands.	Port Louis...	Partly Sf.-gov.	850	383,000	1810
Seychelles.....	Victoria.....	Crown Colony.	148	19,772	1794

In America

Canada.....	Ottawa.....	Self-governing.	3,745,574	5,371,315	1713-1759
Newfoundland and					
Labrador.....	St. Johns.....	"	162,200	120,984	1497-1713
Bermudas.....	Hamilton.....	Partly Sf.-gov.	20	17,535	1609
Brit. Honduras...	Belize.....	Crown Colony.	7,562	38,981	1670
British Guiana....	Georgetown...	Partly Sf.-gov.	90,500	302,172	1803

British West Indies

Bahamas.....	Nassau.....	Self-governing.	5,794	56,113	1605-1803
Jamaica.....	Kingston.....	"	4,363	790,731	
Leeward.....	St. Johns.....	"	701	127,536	
Windward.....	St. Georges...	"	508	167,067	
Barbados.....	Bridgetown...	"	166	198,782	
Trinidad.....	Pt. of Spain...	"	1,864	321,000	
Falkl'nd&S.Georgia	Port Stanley..	Crown Colony.	7,500	2,100	1833

In Australasia

Australia and Tas-					
mania.....	Dalgety.....	Self-governing.	2,972,575	3,774,282	1788
New Zealand.....	Wellington...	"	104,751	897,657	1839
Fiji.....	Suva.....	Partly Sf.-gov.	7,451	120,124	1874
Br. New Guinea...	Port Moresby..	To Australia..	90,540	350,000	1884
Pacific Islands....			12,000	75,000

THE BRITISH EMPIRE—*Continued*

Summary

	Area in Sq. Miles	Population
British Possessions in Europe	121,098	41,823,153
“ “	1,922,001	301,059,571
“ “ Africa	2,190,289	44,166,148
“ “ America	4,026,752	7,514,316
“ “ Australian	3,187,317	5,217,063
	<hr/> 11,447,457	<hr/> 399,780,251

HEIGHTS OF PLATEAUX, RANGES AND PEAKS

Plateaux

	Feet.		Feet.
Tibet	15,000-17,000	Iran (Persia)	5,000- 6,000
Bolivian	12,000-14,000	Australian	4,500- 5,500
Pamir	10,000-14,000	Brazilian	2,500- 2,800
Mexican	7,000- 8,000	Guiana	2,000- 3,000
Abyssinian	6,500- 7,500	Dekkan	2,000- 2,500
Rocky Mountain	5,000- 6,000	Allegheny	1,000- 1,500

Ranges

	Feet.		Feet.
Karakorum (N.W.I.)	18,000-19,000	Atlas	8,000-10,000
Himalaya	16,000-19,000	Pyrenees	7,500- 9,000
Thian Shan	17,000-18,000	Alps	7,000- 9,000
Hindu Kush	16,000-18,000	Altai	6,000- 7,000
Andes	12,000-15,000	Carpathian	4,500- 6,000
Caucasus	9,000-11,000	Balkan	4,000- 5,000
Rocky (in Canada)	9,000-10,000	South African	4,000- 5,000
Cascade (in U.S.)	7,500-10,000	Apennines	3,500- 4,000
Rocky (in U.S.)	6,000- 7,000	Ural	2,000- 4,000
Coast (in Canada)	4,500- 8,000	Appalachian	1,500- 2,500

Peaks

	Feet.		Feet.
Everest, ¹ Himalayas	29,002	Chimborazo (vol.), Andes, Ecuador	21,525
Kunchin-Junga, Himalayas	28,156	Sorata, Andes, Bolivia	21,290
Dhawalagiri, Himalayas	26,826	Illimani, Andes, Bolivia	21,150
Aconcagua, ² Andes, Chile	23,944	McKinley, ³ Alaska	20,464

¹Possibly highest in the world. Another mountain of the Himalayas, known to geographers as "T. 45," is said to be 29,100 ft. high, but has not yet been surveyed.

²Highest in South America. ³Probably highest in North America.

HEIGHTS OF PLATEAUX, RANGES AND PEAKS—*Continued*

	Feet.		Feet.
Kilima Njaro, ¹ Africa.....	20,000	Shasta, Cascade, U.S.....	14,380
Cotopaxi (vol.), Andes, Ecuador .	19,613	Pike's Peak, Rocky, U.S.....	14,147
Logan, ² Yukon, Canada.....	19,536	Mauna Kea (vol.), Hawaii.....	13,805
Antisana, Andes, Ecuador.....	19,335	Fremont, Rocky, U.S.....	13,790
Cayambe, Andes, Ecuador.....	19,186	Mauna Loa (vol.), Hawaii.....	13,675
Demavend (vol.), Persia.....	18,800	Fujiyama, Japan.....	12,365
Elburz, ³ Caucasus.....	18,526	Cook, New Zealand.....	12,349
Arequipa, Andes, Peru.....	18,373	Teneriffe, Canary Islands.....	12,000
Orizaba ⁴ (vol.), Mexico.....	18,314	Etna (vol.), Sicily.....	10,875
Kenia, Africa.....	18,620	Sir Donald, Br. Columbia, Canada	10,662
St. Elias, Canada and Alaska.....	18,024	Stephen, Br. Columbia, Canada...	10,425
Popocatepetl (vol.), Mexico.....	17,800	Sinai, Western Asia.....	8,600
Ararat, Western Asia.....	17,260	Kosciusko, ⁶ Australia.....	7,336
Brown, Rocky, Canada.....	16,000	Mitchell, ⁷ Appalachian, U.S.....	6,711
Blanc, Alps.....	15,781	Washington, White Mts., U.S....	6,286
Hooker, Rocky, Canada.....	15,700	Hecla (vol.), Iceland.....	5,100
Whitney, ⁵ Sierra Nevada, U.S....	14,898	Ben Nevis, ⁸ Scotland.....	4,368
Rainier, Cascade, U.S.....	14,526	Vesuvius (vol.), Italy.....	4,200

RIVERS AND BASINS RIVERS

	Longest Stream. Miles.	Area of Basin. Square Miles.
Mississippi-Missouri ⁹	4,200	1,250,000
Amazon ¹⁰	4,000	2,500,000
Nile ¹¹	4,000	1,250,000
Yangtze ¹²	3,100	700,000
Kongo	3,000	1,500,000
Niger	3,000	1,000,000
Yenisei	3,000	1,500,000
Hoang	2,800	400,000
Lena	2,800	750,000
Ob	2,800	1,000,000
Mekong	2,600	300,000
Amur	2,500	750,000
Mackenzie ¹³	2,400	600,000
St. Lawrence	2,300	560,000
La Plata	2,300	1,250,000

¹Probably highest in Africa. ²Highest in Canada. ³Highest in Europe. ⁴Highest in Mexico. ⁵Highest in United States. ⁶Highest in Australia. ⁷Highest in Appalachian System. ⁸Highest in British Isles. ⁹Longest stream in the world. ¹⁰Largest river in the world, that is, it carries to the sea a greater volume of water than any other river. ¹¹Longest river in Africa. ¹²Longest river in Asia. ¹³Longest river in Canada.

RIVERS AND BASINS RIVERS—Continued

	Longest Stream. Miles.	Area of Basin. Square Miles.
Volga ¹	2,300	600,000
Yukon	2,200	400,000
Brahmaputra	2,000	400,000
Euphrates	2,000	400,000
Indus	2,000	350,000
Danube	1,800	300,000
Ganges	1,800	450,000
Rio Grande	1,800	200,000
Sao Francisco	1,800	200,000
Zambesi	1,800	500,000
Nelson-Saskatchewan	1,732	432,000
Orinoco	1,500	400,000
Orange	1,200	275,000
Murray-Darling ²	1,100	350,000
Rhine	800	90,000
Thames	215	6,000

LAKES

	Altitude. Feet.	Area. Square Miles.	Greatest Depth. Feet.
Caspian Sea, ³ Russia	-84	169,383 ⁴	3,000 ⁴
Superior, ⁵ Canada and U.S.	602	31,200	1,008
Victoria, ⁶ Central Africa	4,000	30,000	590
Aral Sea, ³ Russia-in Asia	158	26,166 ⁴	225 ⁴
Huron, Canada and U.S.	582	23,800	750
Michigan, U.S.	582	22,450	870
Nyassa, Central Africa	1,500	14,000	600
Tanganyika, Central Africa	2,800	14,000	2,100
Baikal, ⁷ Russia-in-Asia	1,400	13,200	4,550
Great Bear, Canada	391	11,200	unknown
Great Slave, Canada	520	10,100	650
Chad, ³ Central Africa	1,000	10,000 ³	20 ⁴
Erie, Canada and U.S.	573	9,990	210
Winnipeg, Canada	710	9,400	72

¹Longest river in Europe. ²Longest river in Australia. ³Salt water. ⁴More or less variable. ⁵Largest fresh water lake in the world. ⁶Largest lake in Africa. ⁷Largest fresh water lake in Asia.

The sign - in Altitude column indicates depth below the level of the ocean.

LAKES—*Continued*

	Altitude. Feet.	Area. Square Miles.	Greatest Depth. Feet.
Balkash, Russia-in-Asia	1,000	8,500 ¹	135 ¹
Ontario, Canada and U.S.	247	7,104	738
Ladoga, ² Russia-in-Europe	60	4,400	—
Athabasca, Canada	690	7,000	730
Nicaragua, Central America	110	3,600	320
Titicaca, ³ Bolivia	12,875	3,300	900
Great Salt, ⁴ U.S.	4,218	2,300 ¹	50 ¹
Dead Sea, ⁴ Turkey-in-Asia	-1,310	370	1330 ¹

MANKIND

White Race	about 783 millions
Yellow Race	" 572 "
Black Race	" 176 "
Buddhists and Brahmins	" 650 "
Christians	" 445 "
Mohammedans	" 180 "
Jews	" 8 "
Pagans and others	" 248 "

ISLANDS AND ISLAND GROUPS

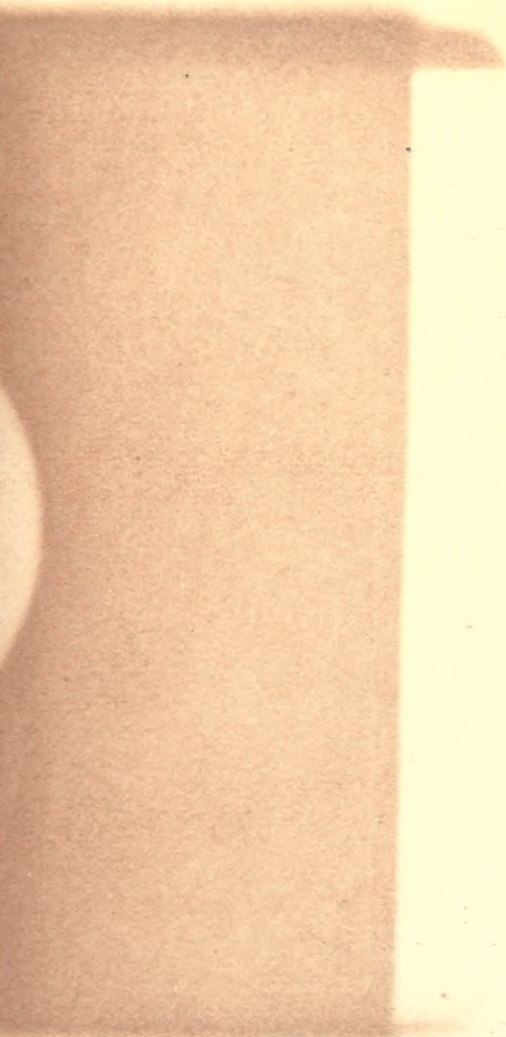
	Area. ¹ Square Miles.		Area. Square Miles.
Greenland, est.	840,000	Albert and Victoria Land,	
New Guinea	312,329	est.	60,000
Borneo	243,843	Java	50,554
Madagascar	229,328	Spitzbergen	46,160
Sumatra	161,612	Sakhalin	45,000
Japan (exclusive of Formosa and Sakhalin).	161,196	Newfoundland	42,200
Baffin Land, est.	150,000	Cuba	41,655
British Isles	120,979	Iceland	40,426
Philippine Islands	114,361	Cockburn, est.	40,000
New Zealand	104,471	Nova Zembla, est.	35,000
Celebes	71,470	Haiti	29,829
		Tasmania	26,385

¹More or less variable. ²Largest lake in Europe. ³Largest lake in South America.⁴Salt water.

The sign - in Altitude column indicates depth below the level of the ocean.

ISLANDS AND ISLAND GROUPS—*Continued*

	Area. Square Miles.		Area. Square Miles.
Ceylon	25,333	Falkland Islands	6,500
Banks, est.	25,000	Queen Charlotte Islands	6,000
Moluccas	20,439	Bahamas	5,450
Melville, est.	20,000	Jamaica	4,424
Prince of Wales, est.	20,000	Cyprus	3,584
Southampton, est.	20,000	Anticosti	3,500
Solomon	16,300	Corsica	3,377
Tierra del Fuego, est.	15,000	Crete	3,326
Hainan	14,500	Cape Breton	3,125
Vancouver	14,000	Galapagos Islands	2,966
Formosa	13,541	Canary Islands	2,944
Sicily	9,939	Prince Edward	2,000
Sardinia	9,297	Trinidad	1,868
Fiji Islands	8,045	Balearic Islands	1,860
New Caledonia	7,630	Samoa Islands	1,701
Hawaiian Islands	6,540	Cape Verde Islands	1,487



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Author

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